Frank Ziegele,
Ulrich Müller

Authentic Universities

Effective university identities in times of transition

Passagen Verlag

The German university system is currently undergoing massive changes as long-held certainties begin to unravel. What must universities do to remain or become relevant and viable for the future? According to Frank Ziegele and Ulrich Müller, this means above all developing a coherent identity that provides both internal and external orientation while setting them apart from other universities. A nicely phrased mission statement is not enough for a university to maintain relevance or to justify its existence. The only universities that will play a key role in the future will be those that know their own particular strengths and are able to leverage them to find answers to the most pressing societal issues and challenges facing us today. And this is quite a challenge in itself, since it requires universities to constantly react to changing conditions and expectations.

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AUTHENTIC UNIVERSITIES

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I. Credible authenticity: The focus of this book

The title of this book – Authentic Universities – is sure to raise a few eyebrows among readers. Is it necessary, or helpful even, to apply another buzzword to universities?

There is no denying that authenticity is a term that is on everyone's lips at the moment. According to literary and cultural scholar Erik Schilling, it is today's "hottest buzzword" and "most desirable trait".[1] A footballer, for example, may be viewed as authentic if he is seen as a "regular guy" who, in interviews, does not merely revert to stock phrases taught in media training and who, in spite of earning millions, is seen by fans as genuine and credible. A holiday is deemed authentic if it affords people the opportunity to immerse themselves in the original local culture. Or a product is seen as authentic if it embodies regional tradition, genuine craftsmanship and intrinsic value. Being perceived as authentic makes people and things stand out from the crowd and lends them distinctiveness and credibility. Authenticity represents an approach and an attitude towards life that appeals to many people and extends into very different areas of life.

But what makes a university authentic? Why should universities strive to achieve authenticity? What priority should universities give to authenticity, and how does it fit as a leitmotif alongside their existing responsibilities in research, teaching and learning and their Third Mission?

Admittedly, the adjective "authentic" takes some getting used to in a university context. Yet, buzzword or not, we firmly believe that authenticity is the key to ensuring that every university will continue to be able to find its own individual role in the future and will be relevant for society and help shape it.

Far-reaching transformations are creating pressure for change

In Europe, and in Germany in particular, we find ourselves in a time of upheaval. Many time-honoured certainties are being called into question and universities are being forced to restructure themselves (this will be explored in greater detail in the second chapter). While this opens up new opportunities, it also creates a need for orientation. Universities are faced with enormous challenges: the lines between professional and academic training and education are increasingly blurred; demographic change is doing away with traditional target groups; the student population is increasingly heterogeneous; academic freedom is under attack in Western democracies; and state financing is on shakier ground than it has ever

been before. On top of this, universities are expected to contribute solutions to societal needs and challenges, including the shortage of skilled staff, sustainability and climate change.

When conditions and expectations are changing as fundamentally as they are now – and as they will continue to change in future – universities cannot simply carry on as before. If universities do not respond appropriately and authentically to the changed environment in which they now find themselves, they will endanger their societal legitimacy – and risk becoming irrelevant. Universities have the potential to actively shape their environment and to advance society as a whole; they can pave the way for innovations and facilitate individual advancement. And that is precisely their job, the source of their legitimacy and the justification for their existence. This will not happen of its own accord. If universities wish to remain relevant in the decades to come and to ensure their existence, they will have to find authentic answers to the urgent questions and challenges facing society today, and which will undoubtedly continue to face them long into the future as well.

Coherent university identities

This means that universities must decide what they are at their core, what their own identity is. To make universities viable for the future, presiding committees, rectorates, university councils, senates, departments and faculties must all

take far-reaching decisions and put them into practice. As to what the future will be like for universities, there is sure to be a variety of different "futures".

The challenges facing universities are so diverse that no single university can hope to address them all. That is why "authenticity" is such an important concept here. Every university or university of applied sciences (UAS) must ascertain for itself what it is, what its particular strengths are, and which of the many challenges facing society it is best equipped to meet. Of course, the sum total of society's needs can ultimately only be met by the university system as a whole.

In the coming years and decades, it will be those universities and UASs that – even in times of change – are seen as authentic that will be able to play key roles and be instrumental in shaping a positive future. These are the universities that

- Are aware of their specific strengths and *present a distinctive profile*
- *Define and establish* ambitious strategic *goals, priorities and values*
- Develop a coherent *identity* that provides both internal and external orientation
- *Recognise and seize opportunities* in the unravelling certainties, thereby restoring confidence in uncertain times
- Are able to leverage their strengths to find relevant answers to some of the urgent questions and challenges of the present; in other words, they are able to *respond to the needs of society* and

provide necessary services or develop hands-on solutions
- *Act credibly and reliably* – in other words, bring the university's identity to life through its actions
- Are able, with the help of professional education and research management, to *continue developing their identity* in a coherent, credible way by interacting with societal challenges and ever-changing contexts.

As we see it, authenticity has nothing to do with "being who you've always been". Rather, it means mastering the art of change. Universities are constantly changing in many areas, a process that is often driven by political requirements. An authentic university is one that succeeds in achieving clarity and coherence in these changes by being true to its core identity (such as particular fundamental beliefs or roles) and gearing the actions and communications of its faculty and students accordingly.

However, for a university to be truly authentic, it is not enough to establish authenticity internally and to "believe" and propagate it – it must be perceived externally as well. At the end of the day, it is external stakeholders who determine whether they experience authenticity in their dealings with a university. Authenticity only arises when reality and perception are in agreement. Having a nicely phrased mission statement or a strategically refined university development plan is not enough in itself. Authenticity reveals itself when it is put into practice convincingly – in dealings with

resources, students, faculty, employees, partners and stakeholders. It is particularly evident at neuralgic points – like in changes and crises – or when there is conflict between different bodies.

Seizing opportunities and defining roles

University administrations, research managers, and everyone with central or decentral leadership roles or management responsibilities in universities and UASs are now faced with the sizeable task of forensically examining what "managing" a university and what "strategic university development" will mean in coming years as conditions continue to change. Here, policymakers need to support universities by offering them the necessary latitude and ensuring overall conditions that facilitate these efforts, including academic freedom, reliable financing and suitable incentives.

However, when the future is unclear and uncertain and universities are diverse and complex, defining an institutional self-image is no easy task. A key requirement for university administrations is that they succeed in organising and channelling discussions about their own identity. As well as this, a productive, results-oriented internal debate culture is always an integral part of an authentic university.

If they are able to do all these things, authentic universities will become players who actively engender confidence in future developments. Should society's unravelling certainties result

in fears and insecurity instead, no compelling solutions to future questions will be found. But if universities are able to show their students and cooperation partners the opportunities that lie beyond the old certainties, they will make a significant contribution to an optimistic society that is ready for what the future holds.

Becoming and being an authentic university may sound rather demanding – or almost like an additional chore. At the end of the day, however, authenticity is something that makes life at a university easier, including for its management. Without wishing to stretch the analogy too far, Danish family therapist Jesper Juul emphasises that "authentic parents" with clear beliefs can draw on these in any situation. This means that their children know what to expect even in new situations, which in turn makes the long-term process of raising children significantly easier. Similarly, an authentic university with a clearly defined core identity is better able to respond to new requirements, which allows it to act with confidence and a clear sense of direction in uncertain times.

Aim and structure of this book

This publication aims to help players in the university system to position their organisations authentically so that they can make a significant contribution to a society that is ready for the future. In this book, we:

- Place the current situation of the German university system within a broader context, i.e. we outline the dynamic environment of unravelling certainties in which universities find themselves and that is forcing them to restructure (Chapter II)
- Describe the wide-ranging expectations that are placed on universities – and which, we can already tell you, cannot be satisfied by any single university (Chapter III)
- Outline courses of action for universities and possible ways of establishing an institutional profile (Chapter IV)
- Describe how a university can use knowledge management to develop a distinct university profile and/or a compelling collective identity (Chapter V)
- And, to conclude, we outline how external conditions can either help or hinder universities in their journey to becoming an authentic university (Chapter VI).

In the current discussion about university strategies and profiles, we frequently look closely at research – not only at universities, but also at UASs within the context of applied research. To create an – admittedly subjective – counterpoint to this, we have focused more on teaching aspects but also turn our attention again and again to research and the Third Mission (which entails an expectation that knowledge, technology and social innovations will feed into a dialogue between academia, business and civil society).

We have also limited our perspective by deliberately restricting our reflections to the German university system. When dealing with certainties that are currently unravelling in Germany, this may in some cases have already happened elsewhere in Europe or worldwide at an earlier stage. This also serves to confirm that we are dealing with real and relevant developments. Because of this, we have used developments in Europe and worldwide as a backdrop and interpreted them with respect to Germany. For our readers from outside Germany, we want to stimulate reflections on what authenticity would mean for them, taking into account their institutional contexts. Authentic universities might look different across the globe but we are convinced that they can be created in all parts of the world.

We hope that this book will provide you with plenty of useful ideas for confronting the challenges facing universities today. Our reflections have benefited from the many projects conducted and findings generated by the CHE Centre for Higher Education over the past 30 years. We hope that this book inspires you to apply our ideas on the future of universities to your own specific situation and to continue building on them.

II. A challenging dynamic: When certainties are called into question

Unravelling certainties in the university system

For many years, the German university sector was governed by a number of seemingly immutable factors. These created a clear framework and clear expectations that held sway for decades, in some cases even centuries. It is also true that these constricted universities' freedom of action and ability to develop – but more on this later. Universities had adapted to these certainties and were able to deal with them. Now, however, the rules of the game are changing dramatically.

If we restrict the time horizon to a comparison of current developments with the history of German universities since the end of the Second World War, it is clear that, in recent years and decades – i.e. in a relatively short period of time given the rich tradition of European universities – at least twelve supposed "truths" have either been called into question or done away with entirely. In the context of teaching and learning at universities, for example, these changes concern nothing less than fundamental questions such as: What is being learned? Why is it being learned? Who is learning it? And how, when and where are they learning it?

The following collection of what we term "unravelling certainties" is by no means complete. As a list that is constantly being added to, it will never be exhaustive. But what these phenomena all have in common is the decisive role that they play for the future of universities in Germany. In this regard, they are representative of further change processes upon which universities need to keep a close eye.

Unravelling certainty	***Underlying trend***
(1) Academic education is something fundamentally different to professional training and is entirely separate from it.	There is a demand for permeable academic paths that combine academic and hands-on learning.
(2) Participation in academic education requires an *Abitur* (a school-leaving qualification that is traditionally needed to attend university in Germany) and is a privilege enjoyed only by a minority.	Opening university education up to wide swathes of the population, i.e. "normalising" university education.
(3) In biographical terms, a university education is viewed as a phase connecting secondary school and a career.	A desire for people to be able to continue writing their own educational biography throughout their lives, and to be able to do so flexibly and while working.
(4) Teaching takes place in the lecture hall in analogue settings with all participants present at the same time. It conveys relevant specialist knowledge.	A desire for flexibility in terms of time and location (including online – digital – asynchronous) and a demand for learning mentoring and generic skills.
(5) Examinations test knowledge. Rote learning is the most important way to prepare for examinations.	Establishing innovative examination approaches (including digital ones) that focus on testing skills.
(6) The goal of university studies is to obtain a major qualification (bachelor's degree, master's degree, state examination). Everything else is seen as "dropping out".	A boom in certificate courses, certificate programmes and partial qualifications, and the stackability of educational modules.

(7) Courses of study and universities themselves are organised into individual disciplines (faculties, departments).	Transdisciplinary courses of study, interdisciplinary/transdisciplinary research and an internal organisation that promotes interconnectivity.
(8) Professors are central figures around whom everything revolves; they are the core of the university. Professors are entirely dedicated to their "calling".	A desire for a role that allows for more varied biographies and for reconciling work with family life; further differentiation of roles and job profiles.
(9) Universities are unthinkable without lecture halls, seminar rooms, libraries and laboratories.	Creating agile and flexible learning environments geared towards the teaching/learning strategy in question, and in some cases moving to a virtual online campus.
(10) For universities, the primary focus is on conducting research and on training the next generation of scientists and academics; at UASs, the focus is on teaching and practical application.	The lines between conventional universities and UASs are becoming increasingly blurred, with differentiation now taking place at the level of individual university profiles.
(11) Research and teaching are a university's two core functions.	Increasingly high expectations are being made of universities as regards the Third Mission (with universities and business/society benefiting from mutual cross-fertilisation).
(12) Universities are public institutions and are financed by the state.	A boom in fee-paying private universities.

Figure 1: An overview of selected unravelling certainties and the trends underlying them

(1) Academic education *was something fundamentally different to professional training* and was entirely separate from it. Dual or scholastic professional training prepared students for precisely defined job profiles or fields and was clearly geared towards actual practice. For academic education, by contrast, the specific professional applicability was (with the exception of courses of study leading to state exams) only of secondary importance.

Instead, it was focused to a far greater degree on a specific body of knowledge pertaining to the field that would be required for an academic career or that would prepare students for prominent roles in business and society.

However, this strict separation between professional and academic training is disappearing more and more.[2] While it is true that academic education is experiencing growth – there were fewer than two million students in Germany in 2005 but nearly three million today – the trend towards "theory" should by no means be interpreted as a rejection of "practice". Prospective students today are increasingly looking for the best of both "worlds" – rather than having to choose academic *or* professional training and education, they want practical application *and* an academic framework. This means that the practical UAS model – formerly primarily known as a *Fachhochschule* - is growing in popularity. Back in 1990, nearly 70 percent of new students were starting out at a university and fewer than 30 percent at a *Fachhochschule*; today, conventional universities and UASs account for 54 and 46 percent respectively.[3] The number of dual study students has also increased at a disproportionately high rate over the past 15 years.[4] This study model is unrivalled in its combination of academic and hands-on learning. It transfers Germany's dual professional training model to an academic framework and develops it further. Another factor is that the Bologna Process has made employability a focal point for universities as well. Professional pros-

pects for graduates also play a role in every accreditation process, regardless of university type.

(2) Academic education required specific school-leaving qualifications – the *Abitur* was the *reserve of a small minority*. In the past, only a relatively low percentage of each year's school-leavers earned the highest qualification, an *Abitur*, which entitled them to study at a university (in the mid-1960s, this figure was 1 in 14 school-leavers).

A university education has long since ceased to be the exclusive preserve of a minority and has even come to be the new normal. Roughly half of all school-leavers now complete their schooling with an *Abitur* or *Fachabitur*. And since the early 2000s, German policymakers have opened the door even further to prospective students by greatly expanding the options for entering university without an *Abitur*. This presents new possibilities allowing people who have completed professional training to move into university education. As a result, around 80 percent of the German population would theoretically be eligible to study at a university (figure for 2022).[5]

(3) Careers followed a traditional path from school to training or university and then a job. In this set-up, university education was something *slotted in between secondary school and a career*, and was to be completed as a full-time student during the standard study time whenever possible.

However, more and more people are now moving back and forth between education and employment – or even pursuing both activities at the same time, for example studying part-time while

working. In 2021, 22 percent of students had already completed professional training prior to their university studies.[6] Part-time study has gone from being an "emergency stop-gap solution to a contemporary form of study"[7] and more extra-occupational study options of this kind are being offered. In other words, a university education is no longer a limited, one-off phase between secondary school and a professional career and has now effectively established itself as a relevant part of a person's educational biography throughout their lives.

(4) Essentially (and ignoring for the time being the special factors relating to art, music and sports universities), *teaching primarily took the form of lectures or seminars*. Learning and teaching were analogue processes, taking place in lecture halls and seminar rooms (or in laboratories) with all participants present at the same time. The focus was on *imparting relevant knowledge*, which was based on the canon of knowledge for the subject in question.

In fact, there has been a threefold paradigm shift in teaching thanks to the coronavirus pandemic, which forced many instructors to take the plunge into online teaching.[8] Firstly, it became clear that "on site, analogue and synchronous" instruction could also be "remote, digital and asynchronous". This gives rise to a wide range of innovative options for teaching, including the use of digital media as part of in-person lectures or the asynchronous, digital communication of knowledge using on-demand videos in conjunction

with the interactive processing of problem-oriented applications on campus (a method known as "flipped" or inverted classroom). Digital, asynchronous formats make studying more flexible in terms of both time and location, opening up new student target groups and permitting a more diverse student body. Rigorous implementation of the inverted classroom concept would also have a massive impact on the demand for physical learning spaces on campus, practically eliminating the need for conventional lecture halls and their rows upon rows of chairs.[9]

Secondly, the pandemic made it clearer than ever before to academic staff that learning is a very individual process, even at universities. This also changes the role of academic staff, which is no longer limited to imparting knowledge. Rather, they are becoming learning mentors who observe and support the learning processes – including during self-learning phases (for example with instructional videos, e-portfolios and/or virtual consultations). This makes an anachronism of concepts like lectures (the German term *Lehrveranstaltung* literally means "teaching event" – why not "learning event"?) or "lecture halls" (do universities still actually want students to simply be lectured at rather than actively participate?).

The third aspect of the paradigm shift in teaching – and, along with the flexibility in terms of time and location, possibly the most significant of the changes – is one that is only visible upon closer inspection. There is currently a fundamental transformation underway in many parts of

university education, moving from a sole focus on imparting knowledge towards the acquisition of skills. Instead of drawing up curricula comprised solely of specialist content, there is now a focus on the skills that graduates need to have. These go beyond technical expertise in a particular field to include generic skills as well. This change, which had already been spurred on by the Bologna Process, has been significantly propelled in the direction of "future skills" and "21st century skills" by the rising tide of digitalisation and the use of artificial intelligence (AI) in the world of work, as well as by climate change and other global challenges facing society.[10] These are the skills that individuals need in order to find their way in a rapidly changing, largely digitalised working world and society. As well as digital skills like digital literacy and digital ethics, they include non-digital skills for dealing with complex, unforeseeable and fast-changing situations. Of particular relevance are, for example, skills suitable for lifelong learning or for solving problems that do not even exist yet.

Universities are currently undertaking very different approaches to establishing a skills-oriented basis for teaching and are coming up with their own creative methods. One example is the "Marburg Module" from the University of Marburg, in which students and academic staff from different disciplines join together to address issues that are currently of relevance to society and that can only be solved through an interdisciplinary or transdisciplinary approach. Students in Schleswig-Holstein can make use of a joint online platform to

acquire and develop future skills in online courses. TH Mittelhessen has taken things one step further with its "Future Skills and Innovation" master's degree programme.[11] This programme treats future skills as its core element and views studying the specific discipline as merely a supplement to this. This is a dramatic and courageous reversal of the attitude that has prevailed to date, namely that competences and soft skills should only be seen as supplemental to a discipline-specific course of study.

(5) With the discipline-specific exceptions of practical laboratory courses or music recitals for those studying music, students' *performance* has for decades been gauged primarily in the form of assignments, exams or oral examinations. Preparing for these examinations consisted mainly of learning by rote and repeatedly practising methods.

As with teaching formats, examination formats owe their recent burst of innovation to digitalisation, and in particular to the coronavirus pandemic. Alternative electronic examination scenarios (for example open-book exams or open-web exams without supervision), the use of digital examinations involving specific software (such as architecture examinations with CAD programs) and remote oral examinations (possibly with students worldwide) are increasingly becoming fixtures in the examination landscape. The acquisition of skills during the learning process is documented in e-portfolios. New forms of assignments or the generation of a programming code are linked to the documentation of co-creative processes using

AI. This means that the long overdue change from testing knowledge to testing skills is finally happening in examination culture – as it has done in teaching too – and that this change is taking advantage of the possibilities offered by digitalisation and AI. It is possible that other examination approaches will also manage to establish themselves on a broader scale in coming years, such as project-related group examinations.

(6) The goal of a multi-year course of studies was always a *"major" degree* – traditionally *Diplom* and *Magister* (roughly equivalent to a master's degree) or state exams for certain professions and, since the Bologna Reform, mainly bachelor's or master's degrees. In some cases, there were not even any intermediate examinations. This major degree was an entry into the world of work. Whenever a course of studies did not reach this point, the student was considered to have "dropped out". Anything achieved below this threshold – with the possible exceptions of IT or music studies, where attractive job offers frequently enticed students to abandon their studies – was worthless in the professional world.

This focus on a major degree has now changed and not all students complete a full course of studies with the goal of obtaining a bachelor's or master's degree. Some prospective students, particularly those interested in continuing education, are now seeking out those individual components that are relevant for them – for example a Data Analyst certificate course focusing on how to work effectively with data. In continuing academic

education, there is a clear trend towards short formats. More and more universities are offering certificate courses (equivalent to a module) or certificate programmes (several coordinated modules). Working closely together with companies, these combine university modules with company-internal training to earn certificates in specific areas. In a European context, these may also be termed "micro-certificates" or "micro-credentials".

Something that is actually quite new in Germany – but has been around for some time in Switzerland – is CAS/DAS programmes. A Certificate of Advanced Studies (CAS) combines specialist knowledge on specific topics and serves as an additional qualification in a particular field that is worth at least ten ECTS (European Credit Transfer System) credit points. A Diploma of Advanced Studies (DAS) combines multiple related modules for in-depth training. It is one to two years in length and is worth at least 30 ECTS credit points.[12] The "advanced" designation indicates that it is at a master's degree level. At the bachelor's degree level, the corresponding qualification is known as a Diploma/Certificate of Basic Studies. In many cases, these certificates can be supplemented at a later date and aggregated into traditional degrees. In the same way, for example, students who are pursuing an extra-occupational master's degree and, during the course of their studies, realise that they are unable to balance a full course of study with their work and family lives, have the option of switching over to a DAS or CAS.

In this way, the new certificates create flexibility. The choice of qualification depends on students' individual goals. For example, if an employer is paying for a module that will supply an important skill for a job, an individual module might be an appealing option. A DAS certificate is an extremely attractive choice for students who require a coherent academic qualification in a particular professional field rather than a complete master's degree course. This means that it should not be assumed that the final goal is always to accumulate micro-certificates in order to earn a higher qualification.

(7) University education and research have always been *organised into disciplines*. This can be traced back to the Middle Ages. At a medieval university, once students had finished their basic studies – *septem artes liberales* or "liberal arts education" – only three higher faculties were available for them to choose from: theology, law or medicine. This faculty structure was established by the Université de Paris at a time when imparting encyclopaedic knowledge was no longer a viable approach, and the age of polymaths was truly a thing of the past. The canon of academic disciplines was expanded significantly in the 19th and 20th centuries, particularly in the social sciences and technological disciplines. To a certain degree, there was also greater internal differentiation within each subject area. However, they held fast to one principle: a course of studies should almost always be clearly assigned to a specific discipline and offered by a particular faculty.

Today, there are nearly 22,000 courses of study available in Germany and differentiation is on the increase. Of the new courses that came into being in 2020 and 2021, only one in five is tailored to a single discipline (e.g. "mechanical engineering") in the traditional sense. Courses of study are specialised in sub-areas within academic disciplines (e.g. in business administration these might be "Marketing" or "International Business") and/or in applying a discipline to a particular sector (even including university and science management, something that will be of importance later on). Others combine various disciplines (e.g. geo-informatics or business engineering) in what might be termed "hyphenated subjects". This is taken to its logical conclusion with courses of study with a thematic or topical focus (e.g. "New Work", "Sustainability" or "European Studies") that have no disciplinary designation whatsoever.[13] None of these approaches can be accomplished without interdisciplinary collaboration.

At universities, the blurring of boundaries between faculties is driven even more by research than it is by teaching. More and more future challenges can only be dealt with if different disciplines join forces to research a problem together. Some universities, like University College London, now define their strategy through their transdisciplinary contribution to addressing the "grand challenges".[14] The Berlin University Alliance, a cooperation platform for the three research universities in Berlin, is taking a similar approach.[15] Whereas the faculty or institute continues to offer a home

for a discipline, research is increasingly conducted in an interdisciplinary fashion. In some cases, subjects are being merged to form new discipline-specific units (e.g. in mechatronics).

This shift in the significance of the conventional disciplines is now evident not only in courses of study and research products, but also in the internal organisation of universities. An internal organisation based solely on the conventional faculty structure can hold back a university if this means that the faculties do not abandon their "knowledge silos". Universities outside of Germany have been experimenting with structures that create interlinkages between subject areas for significantly longer than has been the case in Germany, even though some initial approaches are now being taken here as well. These can be organisational units that initiate interdisciplinary work (such as the Forum for Interdisciplinary Research (FiF) at TU Darmstadt[16]) or properly funded clusters – scientists/academics can be members of these while also belonging to the faculty. Or it could involve matrix structures: the newly founded University of Technology Nuremberg (UTN) views itself as an interdisciplinary network university, and is therefore not organised according to individual disciplines but rather in overarching departments that cross disciplinary boundaries.[17] Something similar had already been implemented a number of years ago by the Hamm-Lippstadt University of Applied Sciences – another new institution without any historical "baggage".[18] TU Munich has also replaced its faculties with "schools". TU

Dresden has created larger units called "areas" that each encompass several faculties. Certain responsibilities have been transferred at area level, including budgeting authority and various administrative tasks, with a view to achieving greater flexibility between the disciplines and harnessing economies of scale.

(8) Professors always represented the academic heart of a university. Academics, with the support of the administrative staff, devoted themselves entirely to research. They had to be ready to make sacrifices for knowledge and for science and, in a *spirit of self-sacrifice*, devoted their lives as much to the pursuit of knowledge and the advancement of science as to their own self-actualisation. Being an academic meant being "all in", and the academic community was a select group of people who well and truly felt a "calling". In the original German version of this book, we intentionally did without gender-neutral language in this last statement, because this understanding of the profession naturally entailed all of the familiar disadvantages for the academic careers of women.

Today, the reality is quite different: part-time professors and lecturers help to ensure that instruction is relevant to the real world. Professors' careers are becoming ever more diverse; today, it is no longer unthinkable for them to move between the worlds of business, academia and policymaking. Even beyond this, the conventional professorial role is currently being "unbundled": instead of everything being done by a single individual, roles are becoming more and more differentiated – and

that is especially true in teaching. Nuanced job categories and profiles like "lecturer" and "instructional designer" are taking over responsibility for specific subtasks in the learning process, putting an end to traditional personnel structures. Suddenly, professors are being expected to work on an equal footing with instructional designers – i.e. experts in designing (digital and analogue) learning settings – on developing teaching events. Even apart from that, management functions at universities have for years been changing from being positions that were held, often unwillingly, for a specific period of time, into independent positions that offer attractive long-term career options.

Academics, lecturers and researchers are increasingly reluctant to sacrifice their private lives to a great degree for science and the pursuit of knowledge. To a greater and greater extent, research is no longer seen as a calling – i.e. "an all-encompassing purpose in life that defines a person's identity" – but rather as a profession, and there is a growing desire for working conditions that are "similar to those enjoyed by other professions".[19] A situation where people with familial responsibilities have lesser career prospects is no longer accepted. Instead of sacrificing themselves for the advancement of science, today's academics focus on finding a healthy balance between working and family life. In 2015, Muriel Helbig made waves by taking parental leave just a few months after becoming President of the Fachhochschule Lübeck (now TH Lübeck). It was a decision that sent a powerful message. Family-friendliness is

establishing itself as a feature of university life throughout Germany and is increasingly important for recruiting new staff as well. Universities are specifically targeting dual-career couples, an area where they can score bonus points by offering childcare and the opportunity to work from home. Many universities are members of the *Familie in der Hochschule* (Families at Universities) association and have committed themselves to a family-friendly code of conduct.[20] Even if there is still a great deal of room for improvement, and the shortage of skilled staff is one of the drivers of employee-friendly rules and regulations, it is still fair to say that, in their role as employers, universities have learnt to take a holistic view of their employees as people and to account for their care and support needs.

(9) A university that did not have *distinguished or, at the very least, functional premises* was simply inconceivable. In particular, lecture halls, seminar rooms, laboratories and libraries were viewed as essential to university life. The university buildings themselves – in some cases even former castles or other palatial structures – were indicative of the importance afforded to research and knowledge. Even today, the "spatial and material furnishings" continue to play a significant role in the institutional accreditation process as to whether a private institution can be recognised as a university. In many cases, the size and number of rooms (offices, laboratories, etc.) were also a favoured point of haggling in the appointment process of professors.

We have already looked at how the inverted classroom approach has changed the concept of learning spaces. Perhaps lecture halls will soon be a thing of the past. It may be that – given the lengthy lead times involved in construction planning – the learning environments we are building today are actually tailored to the concepts of yesterday. Even the idea of bringing research and teaching closer together spatially may create a need for different, more agile and more flexibly configured spaces. In keeping with the premise that "you don't know what you've got until you lose it", the coronavirus pandemic also demonstrated that the university campus has a long underestimated significance as a social location that goes far beyond its function as a pure learning environment. And, finally, a cafeteria that cannot also be used as an interactive learning environment may also be an outdated concept. In other words, when designing rooms and buildings today, less thought should be given to creating something architecturally impressive and more to how these spaces are aligned with the strategy and the teaching and learning methods of the universities themselves. Just as teaching has been altered by digitalisation, administration buildings have also been impacted, with mobile work and New Work changing the importance and design of administrative areas on campus.

Ultimately, there can also be universities that no longer need buildings or a physical campus. In 2022, the concept for the new Tomorrow University received university accreditation from the

Wissenschaftsrat (Academic Council) and the State of Hesse. This private university sees itself as a "remote-first institution", doing away entirely with lecture halls and relying instead on an online campus that can be reached using an app.[21] Overall, there has been significant growth in remote studies, especially at private universities. A new way of thinking is in evidence here: the number of square metres does not automatically say anything about whether an institution can be seen as a university or not.

(10) For a long time, there was only one type of institution for higher learning: the university. At the end of the 1960s, engineering schools, higher technical colleges and technical – none of which had heretofore been classified as universities – gave rise to a new type of university: the university of applied sciences. However, this category *was clearly separate from normal universities.* Universities of applied sciences were limited to fewer subject areas, more regimented and generally thought to be fundamentally different from traditional universities, because they were geared towards practical application rather than research. And, needless to say, the granting of doctoral degrees continued to be the reserve of traditional universities.

Those days are gone. Traditional university types have been joined by new ones such as dual universities (*duale Hochschulen*); also, institutions such as the Berufliche Hochschule Hamburg (as a UAS integrating vocational training) or the Hochschule Geisenheim ("Universität neuen Typs")

do not fit into the traditional typology. Above all, however, the "UAS versus university" duality is on the wane, with each taking on characteristics of the other. While (applied) research has long been par for the course for UASs, more and more universities now have a more hands-on orientation as well. At the same time, differentiation processes are taking place within the UAS category. For instance, UASs are assuming particular international profiles or their own special partnership models within regional innovation ecosystems (this is the designation for a regional network of organisations, individuals and resources with allocated roles all collaborating on the innovation process with a view to developing creative solutions). In the segment of internationalization, a UAS with a strong international focus is in competition with traditional universities with a similar orientation.[22]

What used to be the universities' most exclusive privilege – their right to award doctoral degrees – has been largely eliminated: in 2016, the Fulda University of Applied Sciences became the first UAS in Germany to obtain the right to independently award doctoral degrees in areas with a strong research focus. As of the end of 2023, half of Germany's 16 federal states will permit their UASs to offer doctoral degrees.[23] Even though there are still some unresolved issues – such as defining an application-orientated profile for UAS doctorates that also takes full advantage of their strengths in the doctoral phase – it is unlikely that any federal state will be able to permanently deny its UASs the right to grant their own independent

doctoral degrees in research-oriented fields. Looking back, this was clearly a quiet revolution, one that was bitterly resented by some university professors, but as an idea whose time had come, it simply could not be stopped.

(11) Traditionally, a *university's* two *core tasks* have always been research and teaching. For a long time, universities had a comfortable existence inside their academic "ivory tower" – contact with society was optional and, in many cases, more ceremonial in nature than having anything to do with the university's core activities.

In recent years, however, the Third Mission has established itself as a further responsibility of universities. Transfer is firmly anchored in higher education laws in almost all federal states (many laws also include an obligation to provide continuing education which, for the purposes of this book, we see as being part of teaching). As well as being an expansion of the role of universities, it shows a trend towards society and towards practical application. In Rhineland-Palatinate, the legally defined responsibilities of a university include "the transfer of knowledge and technology, including start-ups", with universities required to account for "the mutual dialogue between academia, business and society" (section 2(9) of the Higher Education Act (*HochSchG*)). In Saxony-Anhalt, universities are not only called upon to work with cultural institutions and "partners of business" but are also told how to facilitate the business-related transfer of knowledge and technology – through transfer offices (section 3(10) of the *HochSchG*).

This is a significant expansion of what is expected from universities. Rather than undertaking their research and teaching activities independently of their stakeholders, they are now tasked with looking for points of contact with society and promoting a mutual cross-fertilisation of ideas. Many universities are underscoring the importance of the Third Mission by explicitly anchoring this in their strategy. For example, TH Köln had already included "shaping social innovation" as a mission in its research profile years ago. Another way in which increasing numbers of universities are reacting to these requirements is by explicitly including the transfer function into the responsibilities of vice-presidents and vice-rectors – in other words, they are declaring transfer to be a leadership task.

(12) Universities in Germany were long considered to be *public institutions* as a matter of course. Just like universities in some other European countries, they were largely financed from the state budget and offered their courses of study without tuition fees – with the exception of continuing education courses and an experimental programme from 2006 to 2014 (when it was terminated prematurely) in as many as seven German federal states at one point[24]. The assumption was that the absence of fees would lead to a steady stream of new students.

However, the days in which universities were solely public institutions are now gone. In the 2021/22 winter semester, 11.6 percent of students were enrolled in a fee-paying private university,

compared with just 1.6 percent in 2001.[25] In fact, a non-state facility – the IU International University – is currently (2024) the largest university in the country in terms of student numbers. As of the end of 2022, there were a total of 114 private universities active in Germany, including 86 UASs. While there were only a few scattered, elite private universities back in the 1980s and 1990s, nearly 90 percent of private university students today are enrolled in a UAS. Some of these private UAS have positioned themselves as providers of lifelong learning, offering services and study conditions for students who also pursue a profession and for students with non-traditional entry qualifications. Prospective students are willing to pay a great deal of money for this, even though state universities still offer tuition-free education.

Many things that had appeared to be set in stone are being called into question by these twelve trends in the university system. The traditional certainties presented here have been identified from a German perspective; some of these unravelled far earlier in other countries or never existed in the first place (such as the public nature of universities), while others represent European or even global trends. At the same time, there are powerful change dynamics in the university system that are evident in many different places and on many levels. Some developments have been observed for years and are changing gradually, almost evolutionarily. Others are of more recent vintage, although some of these have brought about very rapid and significant changes.

Our overview of the certainties that are no longer (entirely) applicable has highlighted trends of varying degrees of dynamism. There are changes that appear suddenly. Some accelerate quickly while others lose speed. The dissolution of certainties is not a linear process – and this can be attributed to the "game-changers". There are events that change the rules of the game very significantly, for example when an extremely important rule suddenly no longer applies or when many rules are impacted simultaneously. As we have indicated on multiple occasions, the coronavirus pandemic was one such game-changer. The pandemic was instrumental in calling certainties into question. More than anything, it helped to speed up developments relating to digitalisation because universities were suddenly only able to work digitally. The excuse of "not having any time" to look into digitalisation was immediately rendered null and void. Digitalisation in universities would not have reached the stage it is at today were it not for the coronavirus pandemic (and it remains to be seen whether it can retain this position in its wake). This also means that the search for new certainties that might be able to take the place of the old ones will not be proceeding in a linear fashion and will call for a high degree of flexibility.

Things are much the same when it comes to the "new kid on the block": artificial intelligence (AI). AI has been developed for many years but can only be said to be a true game-changer since

large language models (LLMs) became widely available in 2022. AI has already popped up occasionally in the description of the twelve certainties being called into question, but it is well worth taking another look to get a better picture of the impact that it is having on these twelve items. Doing so not only highlights the impact of such a game-changing factor but also demonstrates that the aforementioned development trends are not entirely independent of one another.

- AI is contributing to a lasting change in how we view university instruction. The role of academic staff as the sole overseers of learning processes is being fundamentally called into question. This is because motivation and coaching can supposedly also be guided by chatbots, and the process of imparting knowledge can be steered by AI. Depending on the discipline, AI offers many options to invent new modes of co-creation between humans and AI, for example in the field of language learning.
- Accordingly, teaching and learning processes at universities must be rethought and geared (even more) closely towards skills. In other words, universities must emphasise the added value they offer beyond the imparting of knowledge (for example, acquiring future skills, learning together with other students, usage orientation, the university as a social space, innovative learning spaces, "maker spaces", media laboratories for project-related and practical settings). Of course, supporting the

students to make the best use of AI tools is part of that story. Academic staff must find themselves new roles that are geared towards this.

- AI makes it possible to develop existing learning formats and cultures further. Developments in this area can support asynchronous, personalised learning settings, i.e. by strengthening the already existing trend towards individualisation driven by micro-certificates (this, incidentally, is something else that we could also have included in our list of unravelling certainties: a belief that all students in a discipline must learn the exact same things). This relates not only to AI tutoring systems but also to AI systems being used to assist academic staff by serving as an instructional designer for individualised learning and examination settings.
- Imparting "artificial intelligence literacy" as one of the future skills is the job of academic staff and will play a central role in the employability of graduates and for society as a whole – while also being part of the universities' Third Mission. If AI is being used to generate more and increasingly realistic fake news and artefacts, universities are needed to enable people to distinguish facts from fakes, and – in the interests of providing finely tuned assessment and analysis skills – to create standards of good scientific practice as an indicator for reliable information.[26]
- Generative AI is forcing universities to scrutinise the usefulness of traditional examination

forms, like assignments and thesis papers/ dissertations. Using AI tools for writing texts needs to be recognised as the new reality and should be anchored and accounted for accordingly in examination formats. Fundamental understandings of examination culture must also be reassessed, particularly the question of what defines individual performance when AI is used. For example, the business administration faculty at the Prague University of Economics and Business (VŠE) recently decided, in response to AI, to do away with bachelor theses and to introduce a requirement for graduation projects instead.[27]

- Generative AI promises strong efficiency gains in learning designs. Structuring learning content, creating presentations and podcasts, preparing exam questions and many other things are already largely facilitated by AI today. The task of the lecturers will be to use the efficiency gains to provide enhanced quality and added value.

It is worth noting that universities' responses to these game-changers show just how well equipped they are for a dynamic environment. During the coronavirus pandemic, German universities demonstrated that they were well prepared for a digital learning and working world and well able to function there. They have done a better job of overcoming the challenges than other educational sectors and areas of society. It is not totally clear if the response to the challenges of AI already

shows the same quality. In the end, what teaching and learning at universities offers today could to a substantial extent be replaced by AI applications. Universities need to question their business models and learning concepts in order to come up with viable options of co-creation between human and artificial intelligence.

Unravelling certainties in society as a whole

Certainties are not just disappearing in the field of universities – this phenomenon can be observed in Western society as a whole. Former sources of orientation are either falling by the wayside or being forced to take a back seat. And because universities and UASs are a part of society, these changes impact their work and identity as well. Trends at the level of society as a whole are reflected in university education and research. Here, it is worth taking a look beyond the university system at just four developments that affect not just Germany but the whole world:

(1) In the past, *reliable rules* and a *consensus on how to act and react* provided people with orientation and clear expectations. During even the most severe phase of the Cold War, the great powers involved in the conflict – despite the many differences between their "systems" – were in agreement about and fully aware of the logic upon which the conflict was based, i.e. the rules according to which the confrontation between NATO and the Warsaw Pact took place and the form it assumed.

Reactions could be calculated because they followed specific patterns of behaviour. Donald Trump and his ilk are breaking with this rules-based order, opting instead for the unforeseeable impact of erratic decisions and for the short-term advantage in specific transactions.

(2) *In the past, the weight of "alternative" facts was simply not comparable to the weight of "true" facts in political discussions.* Facts may have been interpreted differently, or even manipulated on some occasions. Different conclusions were drawn on the basis of the same facts. And, needless to say, emotional aspects have regularly played a role in decision-making. Nonetheless, the fundamental importance of objective figures, data and facts as a shared basis for any conflict and decision-making processes was never called into question as a result.

However, political players today can argue on the basis of *perceived truths or view alternative* facts as being of equal value or validity – and get away with it. Today, being sceptical of science no longer discredits politicians in the eyes of broad swathes of the voting public. Populist movements serve their audience in particular through social – today's public square – and allow people to shield themselves from the world outside their own filter bubble.

This development is not only proving disruptive to the concept of legitimacy in the political sphere but also poses an intrinsic challenge and threat to universities and science. As well as this, it creates a new task: to respond effectively to science-

sceptical attitudes through well-founded communications – in other words, to increase the appeal of genuine facts. The coronavirus pandemic is a prime example of this: thanks to extensive coverage in the media, many people were able to follow the scientific discourse live and in real time. And, in some cases, they did not understand that having contradictory findings at the same time is an integral part of the scientific process. Another example is the stubborn denial of anthropogenic climate change. If objective facts no longer matter, there is no basis on which to have a constructive discussion. If political decisions are made on the basis of perceived realities, they will be arbitrary and, above all, they will not be appropriate to the situation. If science is met by distrust or even hate and slander, there is a danger that scientists and academics may withdraw from societal debate and that the necessary facts will no longer be supplied. On the other hand, if scientists stand with their important societal role, they might be perceived as a threat by populist politicians, in the end endangering academic freedom.

(3) In the part of the world known as the "West", it was long considered to be established fact that *democracy, as the best form of government*, would automatically win out in the end. It was assumed that most people would ultimately want this form of government because it was seen to be superior to other systems. The success of authoritarian and populist movements in places such as Hungary, the USA and Turkey offers a disquieting example of how countries can very easily head in the opposite

direction, even in the 21st century. It remains to be seen whether Germany is sufficiently stable to keep populist movements far from the levers of government. Even in countries like France that are notable for their European orientation, there has been an enormous move towards those forces that are in favour of turning away from an open and forward-looking Europe in favour of "putting things in reverse".

(4) One final example: For a long time, there was an expectation that the primary impact of technical progress would be the automation of simple tasks, leaving people more time in which to solve more complex problems. Even in the early debates about artificial intelligence, there was a general presumption that AI would be used for automatically steering vehicles, delivering packages, etc. However, it appeared to be almost *inconceivable that people doing more demanding intellectual tasks would be replaced by computers.* This certainty remained intact until ChatGPT and other generative AI models came onto the market and demonstrated that AI could also perform activities that had, up to that time, been the sole preserve of journalists or physicians, for example. It could almost be said that, in certain situations, AI has come to be a doctor's "peer". A major technological advance suddenly changed the rules of the game, as we already indicated in previous sections for the higher education sector.

Unravelling certainties imply an increasingly volatile environment, with numerous developments coming to fruition simultaneously – and, in particular, with developments in society as a whole often manifesting themselves in the form of crises. This gives rise to meaningful *challenges and opportunities*, both for policymakers and for society as a whole, but also in very essential ways for the university system.

Disappearing certainties lead to both greater diversity and an uncertain future. This makes the world more complex and harder to decipher, which in turn creates unease among part of the population, resulting in fears about the future, despondency and a decline in innovation. If, as well as this, things that were previously inconceivable are now possible, there will be a growing need for orientation. Everyone – and students in particular – needs greater transparency and more finely tuned assessment and analysis skills than ever before. This is the only way they will be able to navigate the flexible and differentiated array of available courses of study and the increasingly wide range of university profiles and individual academic paths on offer and to make sound decisions.

In addition, universities must continue to reinvent themselves, which is something they have been doing for centuries. A university that clings stubbornly to traditional "certainties" does not in fact create security but rather is permanently

at odds with the new realities. In concrete terms, this means that a university with a teaching profile that refuses to recognise that prospective students have since come to expect a degree of practical applicability even at universities – and ideally alongside active employment – will have problems in the long term. And the same applies to institutions that claim interdisciplinarity in their mission statement but do not put it into practice. A university that is not willing to accept the fact that even academics want a positive work-life balance and a family, and that ignores the clear demand for micro degrees in its continuing education programmes, will have a hard time finding enough employees and continuing education students. A university that holds fast to its traditional methods solely out of lethargy simply contributes to fears of the future.

Not all universities need to change up everything now or to practise the opposite of what they had done in the past. For example, striving for research excellence of course remains a highly attractive strategic approach for traditional universities. The behavioural patterns that underlie old certainties do not suddenly lose their *raison d'être* – but they do lose their unchallenged status. These traditional behavioural patterns are no longer considered mandatory or equally relevant for all universities – some have really become outdated, while others continue to represent a valid option, albeit just one of many. It is conceivable that a "traditional university" that consciously bucks the trend and retains all of the aforementioned old

certainties can continue to exist in a niche, at least over the short to medium term, and that there will also be a demand for what it is offering. However, a university system in which this traditional form were to continue to dominate would leave significant needs unmet.

This means that no university will be able to avoid examining the degree to which its form to date (or, more precisely, its identity to date) is being called into question by new conditions and by the changing needs and expectations of various stakeholders (students, partners, the local region, etc.). Regular events like accreditation and validation processes can already be used for this. Every university and every UAS is called upon to reflect upon whether "business as usual" will be a worthwhile and rational course of action in the future, and where making changes – even killing "sacred cows" – might be unavoidable. *A university can only become and remain authentic if its particular strengths and distinctive characteristics combine to form a coherent and clearly profiled identity, one that is in accord with the needs of society as a whole and with the expectations of the stakeholders.*

This means that unravelling certainties also present major opportunities: when things that were once relied upon are no longer unchallenged, this opens up new leeway for universities – not only for them to tackle new challenges, but also for finding new answers to familiar issues such as educational equity and participation. In a world of unravelling certainties, universities are absolutely essential as an authority and a trustworthy

source of stability – and as a source of optimism for the future. Strong and responsible universities help to foster trust in rational, evidence-based and discursive solutions, allowing them to act as a bulwark against the fragmentation of society into ever more divergent filter bubbles.

This can once again be illustrated through the example of generative AI: it is clearly and understandably linked to fears and mistrust. However, universities soon abandoned the idea that they should simply ban their students from using generative AI. Instead, many universities were quick to integrate generative AI into their learning and examination formats. The universities provide guidance for using AI, striving to identify the opportunities and helping to make the risks manageable. As a result, they have already succeeded in achieving some quick wins in developing positive and confident settings for co-creation processes between people and generative AI. The universities that have recognised this trend are also making an important contribution to it.

III. Broad expectations: Why it is necessary to set priorities

What is expected of universities

Policymakers, business and civil society place wide-ranging and sometimes even conflicting expectations and demands on universities – and justifiably so, because they each require very different things from these institutions. Yet the sheer breadth of these expectations, when viewed as a whole (or when attempting to gauge just a few of the most important of these expectations) can appear almost overwhelming.

Even just a glance at the three missions of universities (teaching, research and the Third Mission) reveals the diversity of expectations that people have of universities. They are expected to train the academic specialists that are so urgently required – and to "supply" these graduates, naturally at the right time and in the right numbers, with the appropriate body of knowledge or suitable hands-on skills. Universities are meant to ensure that outstanding achievements and special skills among students and doctoral candidates are recognised, and that promising up-and-coming scientists and academics are provided with special support. At the same time, universities are being called upon to

allow people the opportunity to obtain an academic education regardless of their family backgrounds.

Universities are also expected to conduct cutting-edge research – and, ideally, to have prominent scientists and academics in their ranks who have ground-breaking achievements to their name (best-case scenario: Nobel Prize laureates). Universities are meant to perform excellent basic research but naturally application-oriented research as well – and all of this should be closely tied in with real-life practice and partner companies, supporting start-ups and transferring knowledge. As science and knowledge are inherently international, a further expectation is that universities should be internationally networked. They should also enhance Germany's global reputation, foster business links and bring major projects to Germany. At the same time, universities are expected to be very active in their respective regions and to be an effective force there in various contexts.

These are just some of the wide range of expectations made of universities that everyone is familiar with. In order to do justice to these expectations, the German university system has to date relied more or less successfully on a distinction between universities, "Universities of Excellence" (*Exzellenzuniversitäten* – which have been taking shape for a number of years) and UASs (plus various universities with a particular specialisation like technical universities, teacher-training universities, and art and music universities).

As long-held certainties are now beginning to unravel (as detailed in the previous chapter), the expectations being made of universities are becom-

ing even more varied. Increasingly, universities are being expected to become involved in policy discussions and decision-making by supplying the facts and findings that offer an objective basis for this, thereby exposing demagogy and conspiracy theories for the general public. Universities are meant to ensure that facts are recognised as such and that decisions made based on these facts can be understood and verified. A task that is becoming of fundamental importance for universities is seeking out points of contact with society and promoting a cross-fertilisation of ideas – the importance of the Third Mission is growing rapidly. Naturally, universities are expected to respond to changing expectations among prospective students. These include the need to have greater flexibility, to be able to reconcile their studies with familial responsibilities, and to take full advantage of the possibilities offered by digitalisation. Universities are also being called upon to help solve societal problems and to help find answers to the questions and challenges that are currently shaping public discourse (sustainability, climate change, crisis of democracy).

Graduates should leave university not only with professionally valuable, up-to-date expertise, but also with an enormous range of future skills – i.e. with the generic skills that will enable them to apply theory independently to solve future problems that are not even known today. However, universities should also design and offer lifelong learning and continuing education programmes. They should work closely together with vocational education providers to create new, permeable education products. They should help prospective students to

achieve their own individual education careers.

How can a single university achieve all of these things simultaneously? The answer is simple: it can't.

A university cannot do everything.

No matter how hard a university tries to stretch its capacities, satisfying such a diversity of requirements in a single location at the same time would be impossible. No university can perform all of these tasks equally well. Nor do we view this as a worthwhile objective: if, for example, a UAS has to balance outstanding applied research and a doctoral programme with permeability to professional training, and regional and international engagement, all of this might cause it to rupture in the long term or lead to constant internal conflicts and to struggles over the internal allocation of resources. A university that claims to be equally good at everything is probably not particularly good at anything. A university with multiple identities is not "tangible". It is unable to tell a story about why it plays a necessary role – or about how it can make a distinctive contribution to shaping the present and future.

Back in 1998, Burton R. Clark was already talking about the "enormous demand overload" facing universities.[28] Two years later, in the German-speaking world, Detlef Müller-Böling postulated that the university of the future would have to have a clearly defined profile – in other words, it would have to "be distinctive, develop strengths and showcase a special service portfolio".[29] Clearly, the idea of differentiating university profiles is not a new one but the un-

ravelling certainties of today are giving it a decisive boost and allowing it to really take hold. Thanks to the increasing diversity of students and the variety of challenges facing society – challenges that universities must help to solve – one-size-fits-all universities have no place in the future. A university that is known worldwide for its climate change solutions will not automatically be able to train outstanding specialists for an ageing society as well.

Differentiation is not limited to university type

The good news is that the German university system is clearly no stranger to differentiation. The notion that every university should be able to offer students everywhere similar services fell by the wayside a good twenty years ago. Since then, the universities have been bound by law to formulate strategies and profiles to define their specific objectives. Many universities have accepted this responsibility and have already made intelligent use of this new latitude.

The differentiation via two classic types of university that took place 50 years ago was a success story. The UAS model's focus on application and real-life practice accounts for much of its authenticity. However, the binary distinction between universities and UASs has already proved to be no longer sufficient as a means of explaining the profiles of universities.[30] On the one hand, universities and UASs are becoming more similar to one another in a certain way; on the other, further differentiation is also taking place within these two types. As a result, the unravelling of traditional certainties

is causing the UASs to be pulled in different directions, e.g. to either have a close collaboration with corporate training providers, or to prioritise application-oriented research in conjunction with support for the next generation in subjects typically found at UASs, and also by means of application-specific doctoral programmes. In addition to this, new types of university have come into being such as dual universities (*duale Hochschulen*) or vocational universities (*berufliche Hochschulen*). University and UAS profiles are a good starting point for differentiation in the university system but should by no means be seen as an endpoint.

Universities need to set priorities

In practical terms, it is already the case that not all universities perform all tasks with the same intensity and success. Instead, universities are setting priorities by defining areas of focus – ideally, these are the result of a strategic process and have been proven to be a good fit for the university in question. In the worst case, the selection of an area of focus "simply happened over the course of time" or is something that has not really been questioned for a long time. In this case, a university can consider itself lucky if their focus is a successful one; a managed process offers better chances of success. There are four factors that should be motivating universities (and in many cases already do so) to consciously and strategically plan their orientation, priorities and profile:

(1) *Limited resources make setting priorities essential.* Both time and finances are finite. Conditions over which universities have no control – like the "debt brake" (a binding German legal limit to the volume of public debt) and the consequences of multiple crises worldwide – are limiting the financial scope of public budgets, and it is clear that resources for the university system will be constrained as a result.

(2) *A clear "self-awareness" is a source of orientation internally and strengthens a university's capacity for action.* A university that does not really know what it stands for or what its goals are is in danger of permanently losing focus, both in its decision-making and in its internal and external communications. That is why a university requires an internal frame of reference that orients strategic decisions and their consequences (resource allocation decisions, hiring decisions, etc.) towards goals shared by the university community (academic staff, students, etc.), thereby legitimising it. It is an area in which a university must quite literally develop a "self-awareness" by means of a clear, attractive and compelling identity.

(3) *External partners and students expect profiles to indicate strengths clearly.* As diverse as university partners are, they all have one thing in common: each of them has valid information needs. A ministry of science and research, for example, wants to ensure that the federal state's specific objectives are being met. University profiles create transparency that helps employers who are looking to partner with universities. Students also have an interest in learning which universities are primarily addressing which target groups, which topics are the focus of

their activities, what the focal points of their study programs are and which fields they do not cover. And whether or not the overall study experience is a good fit for their own interests. Particularly for competitive situations in which prospective students can choose from a large range of universities – such as in the case of business administration programmes in major metropolitan areas – it is vital for universities and UASs to be able to set themselves apart from their competitors in some way. All of these parties act on the assumption that universities are clear about their own individual profiles and can clearly communicate these externally.

(4) *External communication requires clear messages.* Any attempt to convince external players that a university is accomplishing big things solely through the sheer volume of projects, approaches and areas of focus is doomed to fail for practical reasons alone. When university staff and students are confronted with the classic elevator pitch "What does your university actually do?", they will certainly not be able to list two dozen areas. Nor could a university flyer or info chart contain all of the centres, institutes, courses of study, continuing education programmes, activities, research projects or transfer projects; instead, they might be able to accommodate three or four key points. Successful academic communication is of decisive importance here.

Components of authenticity

Profile, identity and authenticity are all terms that have cropped up regularly in the previous sec-

tions. Each of these has something to do with the need to set priorities and each contributes to the idea of an authentic university. Because of this, it is a good idea to explain how these terms relate to one another in our view.

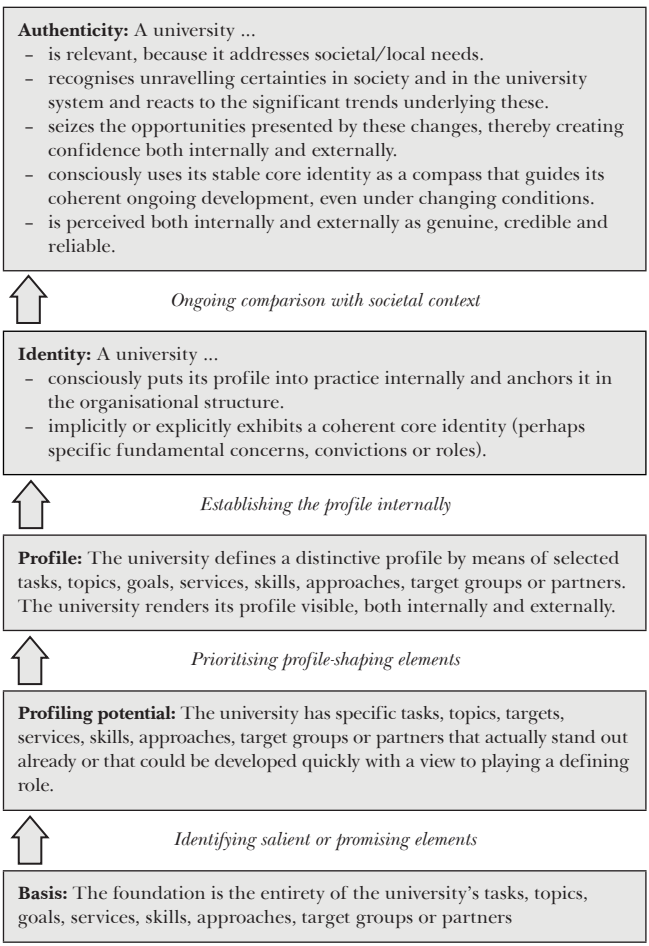

Figure 2: Genesis of an authentic university

Profiling potential is the starting point on the journey to becoming an authentic university. By this we mean the entirety of those tasks, topics, goals, services, skills, methodological approaches, target groups or partners of a university that either already stand out quantitatively or qualitatively or that could be developed quickly with a view to playing a defining role. They have the potential to render a university distinctive and recognisable and to make it into something more than a "general store".

If a university is clear about the priorities, defining elements, flagship areas and performance dimensions that should be put centre stage, and if it has specific goals, then it has a *profile* that sets it apart from the others. A university with a well-defined profile is also in a position to clearly communicate this both internally and externally. This makes it visible and allows it to be seen from the outside as well.

An institutional profile should not attempt to bundle or comprehensively structure all of its activities – such an attempt is not likely to succeed. No university or UAS can present a comprehensive picture of all the approaches and activities covered. The goal must be to achieve a particular level of visibility and significance for the areas, topics and/or methods that are instrumental in shaping the university's profile. It is clear that many university activities will fall outside the scope of its profile; in the best case, these will also be of high quality and enjoy high visibility, partic-

ularly in the scientific and academic community. It is even possible that these hold the seeds for further developing the university's identity when new trends emerge. At the forefront, however, are the activities that define the profile.

A university that not only has a clearly defined profile but also ensures that it is put into practice internally – i.e. that it is inherent in the university's values, standards and organisational structure – can be said to have a clear *identity*. This is the step that brings a university's potential to life, establishing and institutionalising the profile. A family orientation, for example, can only be said to have established itself as part of a university's identity if it is anchored in the minds of the decision-makers whenever human resources questions arise. Whether implicitly or explicitly, an identity that is put into practice generally revolves around a distinctive core, such as specific fundamental concerns, convictions or roles that characterise the university as a whole.

While an identity is a necessity for becoming an *authentic university*, it is not sufficient in and of itself. At an authentic university, the identity is "charged" with the special attributes shown in Figure 2. An authentic university imparts direction, relevance and impact to its profile by combining societal requirements and its own strengths. This allows universities to participate in shaping society's future beyond the old certainties and, in so doing, to provide orientation and confidence in their area of responsibility. And, of course, it allows them to justify their existence and their

funding.

However, it is not enough just to develop a profile and leave it at that. On the contrary, an ability to change is constitutive for an authentic university – as long as the core identity is maintained. In other words, if a university is clear about its core identity, this allows it to remain authentic and retain its viability even when undergoing necessary change processes. If a university's core identity – its fundamental role – is to provide the skilled specialists needed in its own region, it will have to regularly adapt its programme to meet requirements. However, its institutional core identity will remain stable. If a university relies on a specific teaching and learning concept to ensure that graduates obtain the skills they will need in the future but then discovers that a different approach would be much more effective in achieving this goal, then it will change the methodology that shapes its profile. But the university will still remain true to itself because its fundamental role and responsibility within society remain the same. If different skills are required in the future, an authentic university will also be capable of drastically changing course here, if necessary, but while holding fast to the fundamental idea of skill orientation. Authenticity manifests itself in the way that a university's core identity acts like a kind of compass, providing orientation and showing the way forward even in changing circumstances.

If an individual university is unable to satisfy all of the requirements and expectations of the state and society, then these needs can only be met by the university system as a whole. This realisation is extremely relevant when determining what objectives policymakers define – and should define – for universities.

In many countries around the world, policymakers have defined "world-class excellence" as the goal for their universities – in most cases, this effectively means first-class research. In Germany, too, the "excellence initiative" (now known as the "excellence strategy") was created for this very purpose. Jamil Salmi described how a university could ascend to the ranks of world-class universities.[31] Yet if this were taken to mean something along the lines of "we need two or three Harvards in Germany" and if policymakers were then to focus their efforts and university financing completely on this goal, this would be shortsighted. In developed knowledge societies, a "world-class" university system naturally needs a number of universities that are strong in research and publications, and that have global networks. However, these can only be *one* component in a system that needs to develop a wide range of profiles and, in turn, multifaceted excellence.

In addition to universities whose excellence is comparable with the likes of Harvard, Oxford and Cambridge, there is a need for very high, per-

haps even world-class standards for other aspects, such as innovative teaching, innovation and transfer, and employability, not to mention inclusion, involvement, diversity and regional impact. If finance is limited, highly selective investments in just a few world-class research universities can soon put paid to funding for other necessary university profiles. This will deplete a university system's "biodiversity", rendering it incapable of meeting all of society's needs. Despite fears to the contrary, Germany's excellence strategy has not led to this state of affairs so far. However, this is also because even the sum total of all funding devoted to the excellence strategy each year is much smaller than the annual budget of a US Ivy League university; it is not even comparable to the total budget for the top German universities.[32]

The problem with a narrow understanding of excellence that is limited to basic research is that it ignores one of the university system's two dimensions: a university system can be described through its horizontal and its vertical differentiation. In other words, universities vary in their tasks and in their priorities, without judging whether something is better or worse – that is the horizontal dimension. And within a specific type of university profile, there are then differences in terms of quality and performance. Outstanding, average or poor performance can and will be found in all types of university profiles – that is the vertical dimension, where differentiation takes place according to performance.

A university with the goal of being well net-

worked locally and of supplying regional companies with qualified staff can more or less satisfy these needs. For all intents and purposes, a teaching-oriented university might offer poor teaching performance, or it might successfully implement innovative teaching formats. A university that sees and describes itself as a research university might deliver rather modest output (in other words, it may only produce a small number of scientifically relevant and high-quality publications) or it could make a major international impact in its respective domain.

An attitude that reserves the term "excellence" for first-class university research lumps all universities in together, thereby restricting its view to the vertical dimension and entirely overlooking the horizontal differences. This conventional understanding of excellence does not really offer other – equally important – profile types a chance to thrive.

"World-class excellence" through a world-class system

The aim of an intelligent university policy should therefore not be to create individual world-class universities but rather a world-class university system.[33] It is not possible for every single university to address all of society's needs but the system as a whole is capable of serving the full spectrum of objectives and groups. In a world-class university system, there is also active competition within the various segments of the system. The result is that

top performance can be achieved in each segment, yet the benchmarks by which success is measured vary according to the particular university profile.

Germany has a good starting position in the international competition between world-class systems because its technical college/UAS segment has already been a significant factor for over 50 years, demonstrating the advantages of this kind of differentiation. Having a diversity of authentic universities gives Germany a competitive advantage in the international competition between different systems. For example, were we to measure the success of application-specific research collaborations according to the "joint publications by universities and industry" indicator, numerous German UASs would already be near the top of the global rankings. Technical colleges have already demonstrated that an innovative type of university can be a successful export. For instance, Germany's experiences in this area have helped to establish a UAS sector in China and Ethiopia, as well as pilot projects in Vietnam and Jordan.

But what form might these varied profiles actually take? What types of universities could be found within a system of authentic universities, particularly against the backdrop of unravelling certainties? This will be explored in greater detail in the following chapter.

IV. Wide variety: The many ways in which universities can be authentic

The future is diverse

When, as illustrated in Chapter II, traditional certainties unravel along with traditional norms and limitations, universities will have whole new courses of action open to them. In other words, they will need to decide on an identity that can be interpreted authentically for them in each case. As explained at the end of Chapter II, this by no means suggests that all universities will have to jettison their previous priorities, methods and approaches and reinvent themselves completely. However, they will be challenged to reflect upon their identity to date and possibly to make adjustments in cases where carrying on as before would result in the function of a university no longer fitting with the needs of society as a whole or the expectations of stakeholders.

If the universities and UASs make use of this new latitude, these reflection and renewal processes will give rise to a university system that is more colourful and diverse than before. Ideally, university identities should not be differentiated in a vacuum but rather should latch onto the aforementioned societal trends and expectations relating to

universities. These offer a basis for sketching out conceivable profile types. In this chapter, we also think through a radical implementation of the development trends discussed at the outset and then link these approaches with one another.

The possibilities offered by authentic identities

The first step in moving towards the diversity of authentic identities is very much an intellectual exercise.[34] In each of the following cases, we extrapolate one of the currently emerging trends in the university system and assume that an authentic university will "pounce" on this trend and gear its entire profile towards it. If we think logically through the process of adopting a specific trend, this leads to ideal-typical university identities that supplement or intensify existing ones. For the moment, let us leave aside the question of whether the resulting types are consistent with the current legal description of a university's mandate and role.

Needless to say, it is highly unlikely that universities will go "all in" and bet on a single trend. It should also be noted that the following types of authentic universities do not constitute an exhaustive list and should not be taken normatively as defining a "system structure". Instead, they should be seen as pointed hypotheses. They are a collection of twelve examples of universities in the future which, in the spirit of "discovering new possibilities", illustrate the sheer scope of pro-

filing options and which, of course, can also be combined with one another. The intensified nature of the hypotheses should encourage people to consider running through similar extrapolations of recent developments. In addition, if a university were to choose such a profiling option, it would not need to implement all the measures that were described. Rather, the range of options presented should be seen as illustrating authentic profiles and identities with examples designed to make them as accessible and tangible as possible.

Of course, the chosen approach of analysing future trends is not capable of anticipating all future disruptions that are triggered outside the university context and that can change everything again. Firstly, this is because any speculations regarding coming disruptions would be on very shaky ground. Secondly, the unexpected, far-reaching impact of recent events like the coronavirus pandemic and the availability of generative AI has shown that such disruptions tend to accelerate and intensify trends rather than challenge them head on.

Twelve ideal-typical university identities

(1) *The Regional Engine:* The term "engine" sounds like a driving force and this is exactly what is meant here – a university that sees itself as a driver of innovation in its immediate environment and that helps to advance its region. These are very important in Germany, where regional SMEs

are the backbone of the economy. As a university with a strong Third Mission profile, its strategy focuses greatly on providing skilled labour and on knowledge and skills transfer, further education and/or social involvement. It has a number of roles to play in the regional innovation ecosystem (i.e. in a regional network of organisations, individuals and resources that aims to come up with creative solutions), complementing the functions of public-sector and private partners in the innovation process.[35] In this way, the university establishes itself as the partner of choice for policymakers and businesspeople in the region and is included in regional development strategies.

Working closely together with local players, such a university makes a key contribution to strengthening its region in the long term. Here, its programme is geared closely towards the specific needs of companies and civil society players in order to train the region's skilled workers and/or to make a contribution towards democracy in action there. This means that it sets a predominantly technical or societal focus in its regional impact, depending on the needs of the local environment and on its own expertise. For example, it might have a regional education campus where students and trainees learn together, where the employees of regional companies can engage in upskilling and where there is an infrastructure for start-ups. As well as this, the university raises its local profile through cultural programmes, discussion forums and mobile scientific "task forces" which, as partners, are involved in an extremely wide range

of regional activities. A "knowledge floor" or "knowledge workshop" in an inner-city building and a university "pop-up store" could raise awareness of the importance of education as a foundation for a strong region. A university with a Regional Engine profile is instrumental in driving the development of its regional surroundings.

(2) *The Online University for Professionals:* This university is synonymous with lifelong learning. Almost all of its students are gainfully employed and/or are responsible for caring for family members and wish to study part-time. The virtual teaching and learning environment gives these people the flexibility they need to achieve their goals. In its promotional activities, the university highlights the option of having access to a university education without an *Abitur*, i.e. the school-leaving qualifications traditionally needed to attend university in Germany. Here, of course, there are clear standards and procedures governing the recognition and crediting of non-academic skills – those acquired on the job, for example. In this way, the online university is instrumental in making knowledge and academic education readily accessible for new target groups and professional fields. The students live all over the country, as do the academic and administration staff, who work from home for the most part.

The Online University for Professionals develops approaches like innovative concepts for imparting knowledge that can work beyond the confines of a lecture hall and aims to harness efficiency gains through the sheer number of

students. With the aid of AI-assisted chatbots, the students are "targeted" directly as soon as they visit the university's website for the first time. However, the online university also offers one-to-one advice via video conference to help potential students find a course of studies that is compatible with the time demands of their job and family. For this, a series of standardised full- and part-time study models is available for students to choose from – in some cases in each semester anew. The university sets up and maintains pools with digital teaching and learning materials that can be used by all academic staff. AI helps students to use these learning materials and allows them to pinpoint – and close – their individual skills gaps. The university also develops standardised digital processes for quality assurance. As the professors conduct research on digitalisation and the labour market, the research has a direct impact on their teaching. The online university shows how digitalisation can be used consistently and efficiently for the benefit of a large, heterogeneous yet specific group of students.

(3) *The Guidance University:* The fundamental concept of the Guidance University is that students build up individual skill portfolios in the course of their own personal lifelong learning biography. The students outline their goals with input from their personal learning mentor, making these goals the benchmark of their own success. Partial university programmes (which can be supplemented with external programmes) come with micro-certificates; students can select specif-

ic modules to make up their degrees and can put these together to form higher qualifications (e.g. CAS/DAS, bachelor's degree, master's degree).

The concept of "stackability" is central to this university – this refers to a systematic approach in which study modules can be "stacked" according to specific rules.[36] Vertical stackability corresponds most closely to the actual image of a "stack", with micro-certificates being accumulated to form higher and higher levels of qualification. In other words, the subject is explored more deeply (as the stack gets higher). Students can also combine modules horizontally, putting together areas with different subject matters. Stackability can also be skills-based, for example by bundling modules to create a sustainability skill set. The Guidance University defines the stackability options, thereby lending structure to the possible combinations.

A university with this profile type accommodates those students who do not correspond to the traditional profile (which refers to those who have recently completed their *Abitur*, are studying full-time, have an academic family background and clear ideas about university education). It is these students, who have long been under-represented at universities, who benefit most from this kind of mentored learning experience. The Guidance University is open to people from all walks of life and takes students' existing skills and abilities as the starting point for an individual academic path.

The Guidance University specialises in adapting learning content and pathways to the needs and

prior experiences of individual students. In this way, it becomes their "personal coach" and enables them to pursue academic paths at their own pace and with their own goals and learning style. To accommodate individual learning styles, skills-oriented alternatives that accompany the learning process are available – these include learning portfolios for determining learning progress.

The concept of a Guidance University entails a fundamentally different type of work for academic staff. Above all, they are called upon to assume the role of a coach mentoring small groups of students and to be their primary point of contact. This is also reflected in personnel development, where the majority of employees could have basic or further training in supervision or consulting. It is possible that coaches will also be appointed separately – in this case, the personnel structure would assign different roles to coaches and professors. The definition of learning mentoring can also be broadened to include student services like financial or psychological consulting; in Germany, this would mean working closely together with student unions in the "student life cycle".

Another conceivable variant of the Guidance University is one where it steers its students through the learning process with the aid of artificial intelligence. For instance, an AI bot that has already guided students through the application stage and helped them select modules and a learning form may suggest learning content that students still need to achieve their goals. It can also tell them which learning content they can

safely omit and how much time and effort they would need to achieve specific goals (certification of a defined set of skills as a specialist in a certain area) or qualifications. In all, the Guidance University not only helps to make university education more accessible but also helps students in their academic progress.

(4) *The Certification University:* With the Certification University, the roles of educational institutions within the individualised learning process are split up even further compared with the Guidance University. The Certification University distinguishes itself through a high degree of professionalism with regard to crediting procedures and skills measurement. Here, it goes beyond the narrow understanding of crediting that holds sway among German or international education providers. Instead, it also factors in skills acquired informally and "on the job". For example, the Certification University could document the fact that a person acquired project management skills by autodidactic means as part of a voluntary work project. It applies validated testing methods for a set of skills. Rather than offering courses itself, the Certification University "only" verifies and certifies the existence of academic skills that students have acquired elsewhere and evaluates and certifies these skills by awarding qualifications (or partial qualifications). As well as this, it latches on to the concept of stackability in exactly the same way as the Guidance University does. If required, the Certification University also identifies what modules are still needed to complete qualifications (or

partial qualifications) and where these can be acquired. In this area at least, it also provides mentoring.

The Certification University is open to different types of skills – in addition to specialist skills in the narrower sense, it verifies what are known as "future skills".[37] The Certification University could operate online but could also work with regional offices. It is in constant contact with other universities and labour market representatives, draws up requirement profiles for different jobs and helps employers and applicants alike to compare required and actual skills with a view to closing any gaps that exist. For example, it could also work together with a Guidance University, each taking on specific responsibilities. It would also make sense to join forces with an EdTech company that operates a platform where skills certificates are collected and documented or that develops innovations for measuring skills. The Certification University makes it possible to develop individual, lifelong learning biographies and also encourages a focus on skills and improves the employability of graduates. It allows students to bundle existing individual components of academic training into a valuable and recognised (partial) qualification and to make the acquired skills verifiable. However, given the current legal situation in Germany, such a set-up is still a long way off.

(5) *The Future Skills University:* The core mission of the Future Skills University is to give students generic skills for dealing with future situations in which rapid changes throw up a constant stream

of new and complex problems. Here, students are prepared for solving these kinds of problems themselves in these situations.[38] Such a university might exclusively offer postgraduate master's degrees and require students to have a bachelor's degree in any discipline. The course of studies could include for example events on digital ethics, mission orientation (i.e. the ability to create a mission narrative and motivate others with it), data analytics, self-efficacy and ambiguity tolerance (i.e. the ability to deal with ambiguity and uncertainty and to lead others in such situations; this is a good fit for an increasingly volatile world). These are just a few examples from a more extensive list of skills that was drawn up in various studies. However, as well as having special modules dedicated to skills, the core teaching can be shaped with innovative learning settings in such a way that future skills are automatically fostered as well. Because future skills cannot be imparted in the same way as knowledge, a significant role is played by experiential learning – a "learning by doing" culture in which experimenting and failure are permitted – and by learning and experimental spaces such as "maker spaces". Here, testing methods are used to put together a specific future skills portfolio for students. It is conceivable that, in order to intensify their knowledge, students choose specialist events in both their bachelor's discipline and a further subject. This is because the ability to solve problems and the skills needed for this also play a key role when pursuing additional areas of specialisation.

The university's academic staff covers a wide range of disciplines but all of them regularly include future skills in their research. Study courses are also provided extra-occupational (i.e. offered for people working full-time) because the link with the professional world in particular provides scope for application when acquiring future skills.

The university could have a flexible organisational structure. For example, the following matrix structure might be possible: there are disciplinary groups (where contacts for specific disciplines are found) and future skills managers for specific future skills. The future skills managers design the skills-based teaching programmes and research projects and involve staff from the specialist groups. The Future Skills University reverses the previous logic: rather than discipline-specific events being the core of the course with future skills added on in the form of elective and supplementary components, it is future skills that constitute the core and the professional application the (equally essential) consolidation.

(6) *The Learning Concept University:* The Learning Concept University takes a specific teaching and learning approach at the university strategy and profiling level. This approach shapes the entire university and gives a sense of identity to the students and especially to the academic staff. The teaching and learning approach is rolled out accordingly for all study courses and also manifests itself in the academic mission statement. For example, the university could apply an "inverted classroom" approach or problem-based learning in all courses.

The concept could also include an introductory stage of studies for all students of all disciplines together; even in later stages of the course, universal curricular components – for example acquiring future skills – might also possibly form part of the concept. Inevitably, the learning concept would have to be drawn up and optimised in an elaborate, participatory process – this is the only way to resolve the latent conflict with the understanding of autonomy whereby each academic staff member designs their own teaching methods without any internal agreement with the colleagues.

When they begin working at the university, professors are required to take a special course that teaches them the skills they will need to implement the concept (unless they have them already).[39] There will already be a great focus on teaching skills when recruiting and appointing academic staff. Training will be provided to academic staff systematically throughout their careers to enable them to hone their didactic and digital skills. There will be no need for traditional lecture halls. Instead, the campus will be systematically designed with suitable learning spaces as a place for social interaction that facilitates interactive learning. The university will invest in service structures for teaching and digital technology. The Learning Concept University generates a culture of respect for teaching and focuses on establishing a strong team spirit among the academic staff.

(7) *The Tertiary Educational Institute:* The Tertiary Educational Institute elegantly resolves the

dilemma experienced by people who are forced to choose between academic studies and professional training. Here, professional training and academic studies are provided on the same campus, e.g. in the business field of insurances. The established German dual work and study programme model can also be part of this concept. New opportunities are created by systematically interlocking these educational paths. After a joint introductory stage, the participants make an informed decision about the direction that the remaining training should take and whether they should ultimately work towards a bachelor's degree or training qualifications. Should participants wish to change their focus, there is also a clear framework in place for doing so after the introductory stage. Or there is a differentiation as part of the professional training where trainees can take individual academic modules as an additional qualification. As the university, chamber of commerce, companies and professional associations all share responsibility for the joint governance of the university, it is geared towards joint goals. The courses are tied in closely with actual needs in professional life. Throughout the entire training process, there are constantly bridges and flexibilities between the various academic paths.

The common goals that are pursued are also documented in the layout of the campus, which invites interaction between all vocational college, university and professional training players. In the case of technical training courses, trainees and students work in the same laboratory or workshop

and use the machine infrastructure together. The Tertiary Educational Institute is a golden opportunity to interlock the subsystems that make up tertiary education to get a flexible, coherent and permeable system.

(8) *The Grand Challenge University:* This kind of university defines itself through the research topics that it addresses across all academic units by means of interdisciplinary collaboration, thereby developing a theme-based goal of world-class research. The aim is to make a contribution towards solving the major problems facing humanity. A Grand Challenge University takes academic communication to a professional level and publicises possible solutions to global problems. In this way, it provides guidance and a positive, hopeful look towards the future.

One possible example might be a Global Climate University that is devoted to a challenge that is extremely relevant for society: climate change. How could this become a reality? Perhaps by leading international universities and non-university research institutes active in climate research coming together to establish a permanent, supranational organisation with its own legal personality. This means that it would have at least one campus on each continent and that all locations would be networked via a virtual umbrella structure with state-of-the-art digital infrastructure. The basic financing for the university comes from contributions from different countries and all parties agree that this will go towards financing a collective good. Needless

to say, its research projects are interdisciplinary. Rather than having basic study programmes, there will only be global doctoral programmes, possibly also research-oriented master's degrees. The doctoral candidates – and possibly master's students – are directly involved in research projects. Disciplinary institutes serve only as a base for the discipline in question; there are no faculties and all work takes place in agile project structures. The projects are approved and financed by means of an internal competitive procedure. Basic research is implemented through solutions regarding steps to adapt to and impact climate change. Technological and social innovation goes hand in hand. A Global Climate University sows confidence through innovative solutions in the context of climate change.

(9) *The University of Applied Excellence:* This institution defines itself through its commitment to excellence in the UAS sector. While the traditional understanding of "excellence" is generally taken to refer to first-class basic research (either university or non-university), the University of Applied Excellence embodies another facet of the notion of "multifaceted excellence" and implements this with outstanding performance in applied research.

To this end, it makes a point of forging strategic alliances with companies and – according to our hypothetical thought experiment – is one of the few winners in the highly selective state excellence initiative for applied research and innovation. With premium partner companies, the joint ac-

tivities consist of customised study programmes, further education and applied research projects with a transdisciplinary design. Personnel development at the partner companies is closely interlinked with the university's Professional School; on the campus there are infrastructures shared by the university and strategic premium partners. The Professional School bundles the training programmes and acts as the point of contact to the companies – this is in consultation with the knowledge valorisation office that assists innovation processes. Or better still, it merges with the career and alumni service to form a company-university cooperation centre.

The university has also established an innovative model for the applied extra-occupational doctorate. Rather than being based on the typical university programme, this innovative model finds ways to bring the practical, application-oriented focus typical of UASs to the fore while keeping quality standards consistently high. The career paths of the professors – moving between academia and professional practice – are innovatively designed and make it possible to change sides in either direction or to engage in cross-employment. Accordingly, the University of Applied Excellence stands for a special, research-oriented variant of excellence associated with the profile of a UAS. Alternatively, it could also stand for a variant of excellence of the research profile geared towards UASs that does not aim to imitate universities but rather to find a research profile rooted in UASs and to elevate it to an extraordinary level.

(10) *The Civil University:* This university defines the Third Mission and its openness towards civil society as its core feature and puts both of these into practice. For example, if it is located in a place where citizens' approval of democratic structures is low, the university targets this problem and generates an appropriate regional impact. The Civil University is consistently open towards citizens – for instance, a citizens' council is established as an advisory body in its governance, and it has citizens' offices in regional city centres in which information is provided about the university's work and the events for urban society are held. In this way, it plays an active role as a location for and driver of public debate and also acts as a "critic and conscience of society", something that has been discussed and called for in the New Zealand university system since as far back as the 1990s. It could take the legal form of a foundation in order to allow it to include donations from the city in its foundation capital.

As a Civil University, it also sets particularly great store by developing the communication skills of its researchers. The interdisciplinary and transdisciplinary research subjects are geared towards local societal needs, citizens are involved in identifying research topics, and citizen science approaches are widespread. Elements of service learning are firmly rooted in all study programmes – this means that, as part of the curriculum, students carry out non-profit projects in the local communities. In this way, the Civil University makes an important contribution to societal cohesion.

(11) *The European University:* This university could have emerged from one of the EU-funded European University Alliances (because they conducted important preparatory work and already developed joint objectives). Our assumption is that the universities from several European countries taking part in the alliance would merge to form an independent, supranational legal form. The European University offers a European, supranational qualification for all courses, and these are not regulated on the national level. Students and academic staff share a virtual campus, but all students are also required to be present at a minimum number of locations in different countries over the course of their studies. Each of the university locations is mainly responsible for specific interdisciplinary research clusters – however, researchers from all locations work together in the clusters. It is conceivable that the bulk of the European University's budget will come from the European Commission. European values are central to the university's mission. In this way, the European University makes the idea of supranational collaborations between universities in different European countries a reality. The international perspective pervades all subjects and study courses.

(12) *The Blended University:* Ever since the coronavirus pandemic, blended learning has become par for the course for universities. The Blended University moves forward systematically from this starting point, applying the notion of "blending" online and remote components with on-campus

presence to all university activities. It not only upholds the principles of New Work, which are self-evident for universities (value foundation, meaningfulness and self-determination), but also makes the principles of flexibility in time and place a key part of the university culture, together with project-oriented and agile procedures.[40] This New Work approach acts as a normative guideline for the university as a whole. A possible alternative name would be "New Work University".[41]

Here, blended learning for students corresponds with the New Work concept for university staff. The university's services are also carried out in "blended mode" – while administration processes are digitalised, services are also provided on campus, with emphasis on the latter's function as a social space. New learning spaces on campus are geared towards blended learning and blended services; here, for example, canteens also become collaborative learning spaces. The concept of "blended international mobility", which combines physical mobility with "internationalisation at home", applies to students and academic staff alike. Working locations will be flexible, with both academic and administrative staff allowed to determine for themselves where they work and how their working time is to be structured. In this university of the future, mobile working will follow the principle of "freedom to choose the best location for the task at hand". Depending on requirements, this can be in front of a computer at home, in a corporate partner's laboratory, at a public space in the region or on campus.

Comparing trends and identities

The twelve examples of authentic universities resulted from a thought experiment: the increasingly volatile environment with its unravelling certainties is at the root of certain trends. If universities pick up on these trends and push them to their limits, this will lead to ideal-typical identities that we have outlined as a subjective selection. The development trends that we described use opportunities that arise from the newly acquired scope of action and, in each case, pick up on at least one societal need that is reflected in the trends. The following table compares trends and identities. The correlations in the following table represent specific profile types that were mapped out ideal-typically. The authentic university presented in each case comes with a message – a main focus that picks up on certain trends resulting from the unravelling certainties.

Ideal-typical identity	***Main focus***	***Trends picked up on***
1. The Regional Engine	Promoting innovation in the local surroundings and, in turn, advancing the region.	1, 11
2. The Online University for Professionals	Using digital products and services to create flexible programmes for extra-occupational studies (i.e. flexible in both time and place) and for lifelong learning.	2, 3, 4, 5, 9
3. The Guidance University	Steering students gradually towards qualifications (or partial qualifications) by mentoring them and helping them to structure individual skill portfolios.	2, 3, 6, 8

4. The Certification University	Measuring, verifying and certifying academic skills acquired elsewhere either formally or informally and bundling individual components into recognised qualifications (or partial qualifications).	2, 3, 4, 5, 6
5. The Future Skills University	Giving students generic skills that allow them to deal with new and complex problems themselves.	4, 5
6. The Learning Concept University	Gearing the entire university to a specific formative teaching and learning approach.	4, 8
7. The Tertiary Educational Institute	Bringing together and interlinking professional and academic education at a place of learning while also facilitating transitions between the subsystems.	1, 10
8. The Grand Challenge University	Addressing major challenges of our time in an international association of universities through interdisciplinary and collaborative research.	7, 10
9. The University of Applied Excellence	Profiling itself as a UAS with outstanding applied research and a close-knit network with partner companies.	8, 10
10. The Civil University	Opening up consistently in the direction of civil society and achieving close networking via the Third Mission.	2, 11
11. The European University	Strengthening the European identity by merging European universities with a shared virtual campus.	4, 9, 10
12. The Blended University	Establishing a mixture of online and campus components as a hallmark of the university as a whole.	4, 5, 8, 9

Figure 3: Ideal-typical profile types for authentic universities, their core messages and development trends that were picked up on

Legend for the trends (see final column in Figure 1): 1 = Permeable academic paths that combine academic and hands-on learning, 2 = Opening university education up to

wide swathes of the population, 3 = Lifelong and flexible updating of individual educational biography, 4 = Flexible teaching (time/place/)mentoring/generic skills, 5 = Innovative and digital examination approaches/focus on skills, 6 = Boom in partial qualifications, stackability of educational modules, 7 = Transdisciplinary study courses/interdisciplinary research, 8 = Compatibility of job and family/further differentiation of roles and job profiles, 9 = Shaping learning environments geared towards the teaching/learning strategy in question, 10 = Further differentiating university profiles, 11 = Increasing expectations made of universities as regards the Third Mission. Not relevant here because the trend does not relate to content: 12 = Boom in private universities.

The profile types illustrate a range of options. The slogan "discover the possibilities" was to be taken at face value: there are assuredly even more ways of identifying unravelling certainties, deriving trends from these and developing university profiles that fit with the new reality. The intention was to reveal new developments; therefore, institutional profiles which we are already familiar with today were left out, such as the "World-Class Research University" striving for excellence in basic research. The twelve variants should serve as an example of how reactions to unravelling certainties might be integrated into strategic university development. They are also a basis for considering which of the possible future scenarios would be most likely to be authentic for each university's own set-up.

The twelve authentic universities shown have been selected with a view to covering a certain spectrum. This means that they tie in with the university's different core missions – for example

identities two to seven relate primarily to teaching, eight and nine to research and one and ten to the Third Mission. For others, all three core missions are equally important, for example in the case of profile ten or twelve. Also contained are identities that are either geared more strongly to an impact-oriented type of university (profile types eight and ten) or UASs (one, two, five, seven and nine) or that appear to be equally connected to both types. Some arise from a very national logic (seven), others from the internationalisation of university systems (eight and eleven).

Even if, in reality, these may not (ever) be found in this pure form, some of the hypothetical examples are not all that far removed from existing German and European universities. For example, certain features of the IU International University and other distance learning universities can be seen in the Online University for Professionals described below. Similarly, the Berufliche Hochschule Hamburg already comes close to a Tertiary Educational Institute. And Goethe University, Frankfurt am Main, (a foundation university) already refers to itself as a "civil university".[42] A number of Dutch universities (such as Maastricht or Twente) profile themselves as Learning Concept Universities, while quite a few German UASs are on the way to becoming Universities of Applied Excellence. Future Skills master's degree programmes like those mentioned above already exist, for example at TH Mittelhessen. University College Lon-

don is on the way to becoming a Grand Challenge University and some current European university alliances have what it takes to establish themselves as a European University. However, other identities still appear a long way off for the German university system (or for German university law), a case in point being the Certification University. But at the same time, the examples also show that the profiling possibilities presented below offer possibilities for all kinds of universities, from leading research universities to small universities and private distance learning universities.

Relationship between university profile and missions

In any case, the list of ideal-typical university identities shows us exhibits that interpret, structure and combine the three university core missions – teaching, research and the Third Mission – in a specific way without leading to developments outside these three university missions. Our assumption is that these will essentially remain unchanged as the core statutory mandates. However, these mandates can be weighted very differently. And authentic universities will interpret these missions in increasingly diverse ways.

On the one hand, ideas for innovative university profiles can be derived from one of the missions, which then shapes the profile and is put into practice in a very specific way. For example,

in the area of teaching, a university could focus primarily on future skills or adhere to a very specific concept across the board. But on the other hand, innovative university identities can also result from setting priorities that are at odds with the three missions to some extent – for example, a main focus that greatly shapes the university's activities by means of teaching, research and the Third Mission.[43] As well as this, a clearly regional or international outlook would affect all core mandates. Figure 4 arranges suitable examples of priorities that tie in with the identities as shown. Here, a distinction is made between priorities within core missions and those that shape the university as a whole.

Core mandates of a university	*Priorities within the core mandates*	*Priorities that shape the university as a whole*
Teaching	– Geared towards a specific target group (or target groups) – Uses a specific teaching/learning concept – Hands-on learning – Focus on specialist skills – Centred on imparting future skills – Extensive mentoring – Focus on training programmes – Digital-only online teaching	– Primary theme, Grand Challenge – Regional orientation – International orientation – Orientation towards urban society – Interdisciplinarity as the basic approach

	– Teaching only in in-person formats – Focus on hybrid formats – Focus on transdisciplinary study courses – Focus on permeable post-school education system ...	– Specific main focus, specific central idea, fundamental belief, value orientation or worldview ...
Research	– Usage orientation – Concentration on basic research – Interdisciplinary approach ...	
Third Mission	– Technological orientation – Social orientation – Mission orientation – Social innovations – Social effectiveness – Concentration on specific target group(s) or cooperation partner(s) ...	

Figure 4: Selected starting points for university identities

The examples are distinct from one another; they promise the famous USP (Unique Selling Proposition). No one example is better or worse than any other per se. However, it is to be presumed that having a USP does not mean that the institution in question is the only one in Germany or in the world with this identity. None of the profiles will shape the overall university system on their own. Familiar profiles will also remain – for example, the segment for leading research universities with a focus

on basic research, networking with non-university research, and innovative doctoral and post-doctoral models will of course continue to exist. In the same way, there will – in addition to the Global Climate University – be universities that base their identity as a Grand Challenge University on other core areas on which they focus greatly in their teaching, research and Third Mission activities across disciplines. Components of the archetypes described earlier will also come together in reality and form new combinations. At the same time, it is naturally to be assumed that there will still be differences in performance within these types. Quality assurance and development procedures and an element of competition will still be required.

Mandatory and voluntary aspects

The identities are shaped by socio-political requirements, by (technological) changes in underlying conditions, by academic logic, and by the aim of giving each university its authentic role. In each of these cases, it is important to make a distinction between "quality development"/"modernisation" and "profiling" (see Figure 5).[44] Or to put it more simply: to make a distinction between mandatory and voluntary aspects. No university will be in a position to ignore fundamental developments completely. The trends outlined above stand for legitimate societal requirements that all universities need to address to some degree.

	Quality development/ modernisation	*Profiling*
Aim	To act professionally, to move forward in all areas of performance, to be a good university, to satisfy internal and external stakeholders	To be visible, to be seen as clearly standing for something, to stand out from the crowd, to be able to tell a story
Approach	To set quality standards for all tasks and areas, to formulate goals and deliver high quality	To find a common thread (overall view: correlations between diverse activities, shared "headline" that gives a sense of identity), to identify selected USPs (focusing, setting a priority)

Figure 5: Differences between quality development and profiling

One example is the aim of fostering sustainability: no university will be able to avoid including sustainability as an objective in its activities. This will be demanded by policymakers and students alike. That means that universities must remain up to date in this regard and fulfil minimum requirements – in the given example, this relates to energy consumption, water management and campus management, but also by reflecting SDGs (Sustainable Development Goals) in teaching and research. Sustainability is a cross-cutting task that any modern university must take on board or risk losing reputation, demand and funding.

However, sustainability can also be part of some universities' profiling – in other words, being instrumental in strongly shaping the university's activities (as in the above profiles) rather than merely meeting basic requirements. The very name "University for Sustainable Development"

in Eberswalde already indicates that this institution sees its sustainable activities in teaching, research and management as its badge of identity. Exactly the same could apply to the way universities embrace digitalisation or internationality: even though no university will be able to get by in the future without a certain degree of digital learning and international relations, in most cases it will be a cross-cutting task of quality development. Only for the remaining minority of universities will it be a profile element that sets them apart from other universities and positions them distinctively in the university system. For an authentic university, it is not enough to meet mandatory requirements consistently in all respects – being authentic means going the extra mile towards strategic prioritisation.

Authenticity by combining elements

The preceding twelve examples are one-dimensional by design: specific trends were picked up on and systematically formed into a "pure" university profile. By contrast, reality is multi-dimensional, with different trends taking root together in the university, suggesting different profile types at the same time and, in some cases, even leading to contradictions. A European University can easily be a Learning Concept University at the same time; in this case, the education strategy coalesces with the European orientation. However, the combination of Regional Engine and European

University could lead to contradictions. In reality, a university becomes authentic by combining profile elements to make up a coherent picture. When repeated reference is made in the following chapters to the twelve examples, readers should bear in mind that these will usually occur in combinations in most cases; however, it is possible to identify correlations between specific profiles and the questions relating to their implementation.

An authentic university should be in a position to respond to changes in external conditions in such a way that the new external requirement is combined with the university's internal orientation, allowing the university's profile to continue developing authentically. This can be illustrated very well using the example of digital transformation. Naturally, the university of the future needs to have a strategic response to the digitalised world. It needs to position its teaching and learning methods and also the skills it imparts for the digital transformation. However, digitalisation encounters different university identities and, in this way, strengthens different profilings.

Let us take, for example,[45] a university whose central idea and core identity is opening up university education to non-traditional students. Because of this, it puts its diversity-oriented approach centre stage and digital teaching allows it to further profile itself in this direction. Digital programmes enable it to reach, for example, students who have children or care for other family members – or to reach professional persons who want to study while working. Carrying out

chemical experiments in virtual reality makes it possible for pregnant students to take part in practical training involving potentially hazardous substances. Having a digital entry-level semester with open online courses without any access limitations allows all participants to demonstrate their suitability for the studies in question. This in turn enables the university to open itself up to students with poor educational backgrounds. The "digital diversity university" appears to be a plausible and authentic profile. If a university uses increasing volatility to reflect on the previous implementation of an already existing central idea (in this case diversity) and to adapt to a new or emerging reality, then the newly acquired latitude will be used in such a way that the university's identity is strengthened in spite of the far-reaching changes. This is precisely the understanding we depicted at the outset – being able to (or in some cases being forced to) change as an institution while still remaining true to its core identity and its own goals.

V. A university's own identity: How universities can become authentic

The next step is "how"

Even though they can continue to exist, traditional types of universities can no longer claim to be the sole legitimate form. As we have seen, many other profile-defining elements have entered the fray as well. We could even go as far as to say that further innovative profiling is necessary for social trends and requirements to be addressed and covered adequately in the first place. We have endeavoured to make some of these hitherto largely unfamiliar identities and priorities tangible in the form of an overview drafted along ideal-typical lines.

One crucial question for universities has remained unanswered so far: if a university wants and needs to be seen as authentic, what steps does it need to take? The process will not be the same for every university and will depend on where they are at present. If they have only come up with possible goals and priorities so far but have not begun to work on a profile or a coherent way to harness this potential, they are still a long way from attaining authenticity. If a university is already operating in authenticity mode with a clear

identity, then it is more a question of monitoring unravelling certainties and, where required, gradual fine-tuning to remain authentic.

For example, how can a university administration find out whether the current profiling and identity are a good fit for both the university and its stakeholders? Will this still be the case in the foreseeable future? And is this how the university will be seen by the outside world? How can universities be or become authentic? And how can professional education and research management help them to achieve this?

The university management shapes the process

If you want to embark on a journey, you need a suitable starting point. This can be an incident, such as the release of a new university development plan, participation in a competition or a new university president taking office. It is also possible that cuts in funding or dwindling student numbers leave universities with no other choice than to reflect on their work to date and identify viable priorities for the future. All of these are plausible reasons for setting the process in motion and conveying a sense of urgency to academic and other university staff.

It would appear imperative for the university management to "own" the process, possibly together with a guiding coalition (if we are to remain with the Kotter model of change management).[46] The journey to establishing a clearly

profiled and authentic identity is based on fundamental decisions from above, draws on ideas from below and takes inspiration from outside. The university management must establish the basic framework and ground rules for a participatory process within the university. Rather than seeing development plans, accreditations and suchlike as a tiresome chore, it should view them as a welcome opportunity for the university to become even more authentic.

Focusing on the management of the path to authenticity is, of course, a restricted perspective. If a university in the end will be able to successfully develop and live its profile, first of all depends on its researchers and lecturers. They should jointly develop and shape the university's identity. Therefore, this chapter also focuses on organizing participative processes. Diving deeper into how the identity would shape teaching and learning methods and research activities is crucial; however, it goes beyond the scope of this book.

Identifying profiling potential

The journey to becoming an authentic university begins with finding authentic profiling potential and weighing it up (see checklist in Figure 6 for examples of criteria).

Criterion	*Sample questions*
Demand	What is demand like for your existing programmes and research activities? Are there any areas or approaches that are proving especially popular? Is demand for any others in danger of disappearing? What target groups are currently being addressed and reached? What target groups are not? How has demand been over the past few years? Which of the previous approaches and concepts no longer work all of a sudden?
Dynamics	How will the student target groups that have been reached so far develop demographically? What technological inventions are relevant? What are the university's dynamics like compared with other universities (its own particular strength or general trend)? Is a visible trend a flash in the pan or will it last? In what areas does the impression arise that things that had seemed self-evident are suddenly no longer so?
Networking	In what aspects of the university is interdisciplinarity already practised to great effect? And in which activities is extensive internal expertise bundled? Where do effective exchanges already take place within Germany or internationally? In which constellations are formative players from the university and their expertise needed?
Competitiveness	In what qualitative and verifiable ways does the university stand out from the crowd? Where does it have more success or a greater impact than others? Which university topics are also addressed (better) by others?
External image	What do stakeholders think about the university? What kind of image does it project? How far does it "radiate"? Where is the university visible? And what makes it visible here?
Durability	Is there a risk of the university's strengths disappearing again quickly – for example when high-profile top researchers are head-hunted by other universities? Do many players in the university deal with one topic, one challenge or one approach to build a critical mass?
Feasibility and representativeness	Are profile options a good fit with the university's reality? Are potentially profile-shaping areas quantitatively significant as well (e.g. in the case of student numbers)?

Expectations	What do stakeholders and the university community (i.e. academic staff, students etc.) expect from the university? What challenges will the university's environment be facing in coming years?
Social challenges/trends	In what areas is the university already working on the major social challenges like climate change and sustainability? Where are regional needs being addressed? Of the list of trends underlying the unravelling certainties, are there any that the university already serves (extremely well)? Which other certainties are being challenged?

Figure 6: Sample checklist for identifying profiling options

If the profiling direction is made clear by identifying and prioritising salient or promising elements, this is a question of – as shown in Figure 2 – establishing the profile internally, forming an internal and external identity, and continually comparing the identity with the social context with a view to ultimately achieving authenticity. To implement this rather abstractly described procedure, it is of the utmost importance to determine what instruments are used in the process and what the success factors are in shaping it. These questions are to be discussed in the following section.

Pitfalls on the journey to becoming an authentic university

Here, reference is made to ten classic management mistakes – this is to offer suggestions for good practices in the strategic process. The examples are based on real-life observations that we have made in the university system. As they can

occur again and again, it is important to be aware of them and give them a wide berth.

(1) *Unrealistic goals*: Universities in particular place goals like "cutting-edge research" or "research excellence" right at the top of the academic value hierarchy. This can lead to unrealistic goals. In many parts of the world, such as in Southeast Asia, most universities formulate goals like "to be ranked among the top ten universities in Southeast Asia". This is even the case with universities who are clearly not in a position to achieve this in the foreseeable future. Authenticity breaks down when the university's realistic potential is not enough to meet the over-ambitious goals and profile ideas.

However, inauthentic and unrealistic goal descriptions are not necessarily the fault of the universities themselves. This is virtually unavoidable when the profile that would actually fit with the university and address a social need ends up being rejected or blocked. Restrictive financial incentive systems, unbalanced political frameworks and one-sided rankings are examples of how homogeneous, one-dimensional profile concepts are favoured. These narrow down the profiling scope that actually exists. This in turn causes universities to miss out on the horizontal differentiation opportunities offered to university systems and the chance to actively expand their actual strengths and bring them to the fore (more on the role of such frameworks – and how to do better – in Chapter VI).

(2) *Interchangeability of profiles*: An analysis of the mission statements of German universities in 2010

showed that, for the most part, these are worded very similarly.[47] The standard approach is to mention first-class research, high teaching quality, international exchanges and other common academic values. However, these kinds of mission statements do not allow universities to set themselves apart. They also mix up modernisation and profiling (see Chapter IV). In our training events, we at the CHE Centre for Higher Education occasionally use different mission statements (with the names of the universities in question blacked out) and ask participants to guess which university they belong to – the success rate was not very high so far. Generically formulated mission statements might have some motivational effects but add no value to profiles.

In many cases, university development plans (UDPs) are long lists of goals and planned campaigns that include all the university's areas of performance (teaching, research and the Third Mission) and cross-cutting issues (internationalisation, equal opportunities, new generations of researchers, etc.) while hardly communicating any priorities or outlining the specific shape of the university. They often give the impression of having been filled in like a tax return where something has to be entered for each item but without any call for creativity or individual interpretation. Implementing authenticity like this – as a series of boxes to be ticked – would be absurd. An approach like this that is based on a virtually standardised set of possible characteristics and attributes would assuredly not give rise to the profile diversity that

is needed to address the societal needs and trends that were described earlier. Instead, the journey to becoming an authentic university would already be at an end even before the profiling potential could be identified.

(3) *Overly static thinking*: As already discussed, strategy processes at universities are often too static, i.e. not flexible and adaptable enough. In many cases, when the legally required development planning is scheduled, the UDP is drawn up in an internal coordination process. Here, goals are defined and plans of action put together for the coming five years. Ideally, these goals and plans will then be more or less worked through over the next five years. In the worst case, the UDP will end up gathering dust in a bottom drawer. And then the next round begins.

There are two things to bear in mind about five-year plans: firstly, they also need to become reality and, secondly, it must also be possible to adapt them to changing conditions within the period of time in question. If, for example, a development plan was drawn up in 2019, then the five-year strategic planning period would have included a pandemic, war in Europe and all its repercussions, and universal awareness of and access to AI, especially through ChatGPT. It is inevitable that changes of this magnitude will influence medium-term strategic planning – which, after all, aims to establish a profile and identity – and are very likely to have an impact on its profiling as well. As explained at the outset, for a university to be authentic, it must also constantly concern

itself – based on its own core identity – with any changes in the environment and social trends and needs and address these when further developing its authentic profile. Accordingly, processes need to be dynamic and adaptable or their bid for authenticity is in danger of failing. If the university does not have a kind of "compass" associated with its core identity or if this compass is not sufficiently defined, the university will have no benchmark for evaluating far-reaching external changes; in this case, a rethink would be needed every single time. Conversely, authenticity and the processes associated with it allow external influences to be taken on board quickly and productively because the stable core identity provides orientation.

(4) *No tolerance for deviation*: When a university sets thematic priorities, it must also provide sufficient space for new areas to emerge. And when a Learning Concept University profiles itself with its teaching and learning methods, it goes without saying that it should create testing grounds for new and alternative methods. Here, there are lessons to be learnt from Nokia: when the iPhone was launched, Nokia's reaction was to concentrate on producing traditional keypad mobile phones rather than driving forward internal innovation projects. As a result, the company's market share plummeted from 50 to 3.5 percent between 2007 and 2012.[48] Being authentic invariably also implies allowing deviations from the overall picture. Otherwise, if deviations occur, the lack of alternatives means that there will be no scope for renewing

this picture, which in turn will lead to stagnation or even regression. It would be a mistake for a university not to allow any deviation from its profile just because it wishes to appear authentic. A profile means showcasing its features, but it is not meant to determine all activities of a university. Profiling should never be allowed to merely become an end in itself; rather, it must be constantly examined to ensure that it is relevant and up to date. When new approaches offer better ways for the university to achieve its intended impact or fulfil its core mandates, it should never stick rigidly to its old ways.

(5) *Too little or too much participation*: There is no doubt that universities can only achieve authenticity when their staff and relevant external stakeholders work extensively to the same end. However, we are aware of cases in which university administrations have clear ideas about, for example, research profiles but simply communicate these "from the top down", thereby excluding large parts of the university. Conversely, if authenticity is to be developed solely from the "bottom up" proposals of faculties and institutes, this process can easily fizzle out without any tangible result or in a minimum consensus, usually one that reinforces the status quo. In the first case, the profile remains meaningless because it is not accepted or put into practice within the university itself (and, ultimately, cannot be said to be authentic). In the second case, the formation of a distinct profile is prevented from the outset if those involved are intent on defending their status (and resources, etc.) in the

university. Having the right amount and formats of participation is decisive here.

(6) *Organisational structures that hinder collaboration*: The various takes on the authentic university concept described in the previous chapter all have one thing in common: they all call for extensive cooperation throughout the university, with many different players being required to pull together. However, this often runs into difficulties, some of which are attributable to the structures of the universities in question. The traditional organisation of a university into faculties or departments prevents it from being truly authentic. For example, a Learning Concept University is extremely difficult to implement if the faculties insist that their own learning concepts are the only way to impart specialist disciplinary knowledge. A Global Climate University that was organised traditionally into faculties would have a poor initial structure to tackle the "grand challenges" internally. As well as this, greater efforts would be needed to overcome any institutionally consolidated divisions that might exist between specialist areas. A university without any effective mechanisms for internal collaboration will not be able to establish a clearly profiled identity.

(7) *No university-related management approach*: Profiling processes also fail when they apply standard management principles rigidly without taking into account the particularities of the university culture. Strategies merely focused on key performance indicators would not mean much in many academic circles. A university that aims

to push through common goals by "cascading" from top to bottom overlooks the interplay between the university administration and faculties and how they see their own roles. The academic community has its own way of doing things – and that is as it should be. This also means that the unique university culture should be reflected in its education and research management activities.

If a university's activities extend into other sectors with a different culture, this must be taken on board as well. For example, the Tertiary Educational Institute model – which merges academic studies and professional training – cannot work if the players from each "camp" do not speak the same "language". Without "translation" or agreeing on a common "language", there would be constant misunderstandings and conflicts. For example, the divergent views of professional and academic training providers regarding the possibility to modularise educational programmes (academia says yes, vocational training providers say no) are undoubtedly also related to the fact that they do not have any viable common understanding of what the term "modularisation" actually means.

(8) *Profiling as an exercise in "navel-gazing"*: Let us imagine that the rectorate, senate and deanery of a university want to sharpen their vision of the future and, to this end, hold a two-day strategy meeting in a remote area. The mood is productive and a common spirit emerges. The participants discuss the strengths of the university and iden-

tify areas in which it has the potential to excel. But at the end, something very crucial is still missing: this inside perspective is of course an important foundation for an authentic university but is not enough to provide a basis for all relevant decisions on its own. What happens outside the university is every bit as important. Emerging technological changes, the advancement of industrial sectors, the main profile areas of key competitors, changes in the principal target groups and cooperation partners – all of these and much more besides must be set alongside the university's own strengths and compared. Even though strategic instruments like portfolio or SWOT analyses theoretically combine a resource-based view and a market-based view, these are frequently not used in their full scope in practice.

(9) Chasing every "carrot": Some universities can also be seen to make the opposite mistake. In other words, they allow their identity to be determined largely by outside influences (for example through the financing possibilities that arise). For instance, innovation themes are frequently initiated by state financing programmes. For the most part, these programmes have a specific area of focus such as regional innovation ecosystems, sustainability or digitalisation. When competing for this funding, universities tend to take part in as many programmes as possible, regardless of how authentic their role is in the area in question. This gets in the way of setting priorities and comparing university identities and profiling possibilities. A university that chases every

"carrot" that is dangled in front of it will constantly run in very different directions and, as a consequence, is highly unlikely to find a solid identity of its own. Although it might make financial sense to use every good opportunity that presents itself, such an approach will, in the long term, make it difficult to say what the university authentically stands for.

(10) *Lack of implementation*: A strategic target vision for a university is of little use if it cannot be implemented directly through actions, structures and processes and made a tangible reality in this way. For example, a university that wishes to develop into a Guidance University must specify new personnel categories, engage in personnel planning, set up an upskilling programme for academic staff, introduce new criteria and processes for appointment procedures, and ensure that micro-certificates have legal validity, etc. If this is not done, the profile will remain nothing more than a theoretical construct. In some cases, universities suffer signs of "fatigue" after a strenuous strategy process. This in turn causes the wide range of questions relating to implementation – which should actually be dealt with right away – to slip down the university's list of priorities. If the university's vision of the future is to be more than just an idea on paper, a plan of action alone is not sufficient – rather, all processes and structures would need to be examined and adapted if necessary.

Professionalising higher education and research management

If there are so many different pitfalls for a university on its journey from profile potential and identity to authenticity, what can be done about it? Needless to say, the university's success in this regard also depends on higher education laws that grant autonomy and on the financial framework of the university itself (more on this in the following chapter). However, there is another key factor that universities themselves have at their disposal: higher education and research management. If approached with the required level of professionalism, education and research management will help the institution to develop into an authentic university, shape it as required and produce excellent results.

But what does "professional" education and research management actually mean and how professionally are these things approached in Germany? A profession is characterised by four attributes:[49]

- Networks and cooperations exist within the profession
- Stores of knowledge are built up and safeguarded
- There is an agreement regarding the skills needed to exercise the profession
- Access and career paths are well-described and regulated.

The degree to which these attributes are developed determines the level of professionalisation and also how well prepared education and research management is to structure complex tasks as the university moves towards being truly authentic.

So, what are the attributes of professionalisation in German universities? Networking in education and research management is already underway and, in "Netzwerk Wissenschaftsmanagement! e.V.", even has its own professional association of sorts. Subgroups of education and research management are also networked in stable structures such as FORTRAMA for research and transfer managers and UninetzPE for personnel developers. As well as this, stores of knowledge have already been established in higher education and research management, for example in the form of relevant professorships, journals, textbooks and open educational resources. There are numerous projects and publications in which business management tools are discussed – in the context of the various characteristics of academic institutions – and suggestions for optimisation made. It might even be said that a subdiscipline of business administration has evolved with an active community from the realms of academic theory and hands-on practice. This means that the first two attributes of professionalisation have been met convincingly.

However, the necessary skills have yet to be agreed upon. The challenge here is that higher education and research management at universities is split up into a wide range of specific jobs (such as faculty manager, controller, fundraiser, pre-grant re-

search manager, head of personnel, chief digitalisation officer, organisational developer – to name just a few). This means that the requisite skills must be defined for subgroups instead. After all, even though systematic upskilling programmes in higher education and research management do exist in Germany (one of the authors of this book is responsible for the relevant programmes at Osnabrück University of Applied Sciences), these are not usually connected to gaining a foothold in the profession. There are many different means of access and career paths, some of which are subject to significant uncertainty. Surveys have also shown that, although careers in education and research management offer good prospects for permanent employment, the income prospects and opportunities for promotion are rather unclear.[50]

Two of the aforementioned four professionalisation attributes have been fulfilled: this means that education and research management in Germany is halfway towards being professionalised. Nonetheless, it is increasingly clear that an occupational group has since formed (with exchanges taking place between its members) that develops systematic knowledge and safeguards it for widespread usage – and that careers within this group are quite attractive in spite of a number of imponderables. All in all, there is enough reason to be optimistic that higher education and research management will be instrumental in making universities authentic. The next step is now to ascertain which particular requirements will be made of higher education and research management here.

If the identities of authentic universities are diverse, so are the management challenges associated with them. For example, if a university develops into a Regional Engine, then Transfer Management needs to give thought to shaping regional innovation ecosystems and the roles to be developed there. By the same token, Controlling should prepare indicators for transfer and the Third Mission that are relevant for success, and Marketing should develop a regional communication strategy. As well as this, setting up and maintaining regional strategic alliances are no less critical to success. Finally, a suitable management concept should be developed for every profile, setting priorities for specific management tasks.

Beyond these specific characteristics, there are also a number of general requirements relating to managing the journey to becoming an authentic university that apply irrespective of the direction taken. These are closely interlinked with the aforementioned reasons for possible failure. They provide important indications of how to attain an authentic university profile and what factors need to be taken into consideration. This refers first to more general requirements and then to aspects that relate to strategy-building processes.

(1) *Good higher education and research management is geared towards the ability to change.* The overall logic of an authentic university – recognising un-

ravelling certainties, responding flexibly to trends and combining them with its own strengths – is positively crying out for adaptability. All processes and structures that a university creates must be capable of being fine-tuned if necessary. It would be difficult if this were to lead to hasty and erratic behaviour – after all, the idea is for universities to develop their own identity rigorously and steadily. Universities can avoid constantly being on the back foot and having to react quickly if they couple their ability and willingness to change with sound foresight expertise (which we will be looking at a little later).

However, there are many other parameters. For example, internal target agreements should not be cumbersome instruments that require extensive reports after a number of years, or even every year. A better alternative (with far less red tape) would be to have annual status discussions with the option of fine-tuning targets if necessary. If research clusters are set up between different disciplines, they should be given an expiry date and built-in evaluation as a predetermined breaking point. It is also the university administration's responsibility to initiate regular discussion formats about future developments, involving the university council in these discussions.

Higher education and research management is carried out by people, which means that they need to have these relevant skills as well. The future skills catalogue also includes those that are closely related to the ability to change. This means that they should be rooted in upskilling

university management, e.g. with learning skills, ambiguity tolerance, innovation skills (some lists include change skills as a future skill in their own right). Future skills are not just there for students but are every bit as important for those involved in university development.

(2) *Higher education and research management must be culturally appropriate.* Phrases along the lines of "management must fit with the culture" are often heard in debates about university management. Although in many cases this is nothing more than empty rhetoric, culturally appropriate management is nonetheless a critical factor for success in the university sector. Higher education and research management can and must take the university's own culture into account – what is more, it needs to address and make use of it.

Culture not only refers to the way a group thinks (norms, beliefs) but also the way it acts (e.g. rituals, reporting channels) and symbols (language, narratives). Culturally appropriate management includes such cultural elements as a matter of course and accepts them as constitutive. This is because management cannot be at odds with the foundation of academic culture but rather needs to work with it. Academic culture includes, for example, the virtually unshakable belief in the power of peer review (i.e. seeking input from a group of colleagues from the same field to assess the quality of teaching and research). Being aware of this means that universities can take peer reviews on board when working towards becoming an authentic university, for example by having

peers validate trend forecasts. In this case, the instrument is not only helpful from a content perspective but also provides added legitimacy.

At the same time, however, the organisational culture of a university is variable and can be strategically shaped to fit with the profile of an authentic university. For instance, the model of a European University outlined in the previous chapter could deliberately cultivate the European idea by borrowing symbols and rituals from the repertoire of the university culture. Other possibilities might include an internal language policy or having celebrations and academic events on Europe Day, but also consciously sending messages on a values level – for example by implementing European values in the university's mission statement and through research focusing on promoting democracy and on threats to democracy.

(3) *Higher education and research management must act based on evidence.* To be in a position to recognise unravelling certainties and the trends underlying them, universities also need to be able to recognise even weak internal and external signals. These might include, for example, slight changes in demand among students for specific programmes. Only in this way will universities be able to detect, in good time, major changes that are on the way but possibly below the general radar. This cannot be done without qualitative and quantitative empirical evidence. The art of academic controlling consists of bringing relevant data to bear at the right stage of planning and decision-making processes.[51] The profile of an authentic university

should be reflected in indicators which, for example, are presented as input for target agreements and then discussed and evaluated in conversations about the future. It is also important to have a multi-dimensional understanding of the services that a university provides (see Chapter VI).

(4) *Good higher education and research management helps to overcome disciplinary boundaries and stimulates internal collaboration.* Thinking and operating in faculty structures creates a strong academic community in the individual disciplines and helps them to develop further. However, it also leads to compartmentalisation if there are no structures in place to encourage collaboration between the different faculties. Nonetheless, it is precisely this kind of cooperation that is vital for responding to the unravelling certainties, picking up on relevant trends and tackling societal challenges. It is possible to go through virtually all model variants of an authentic university and find a constant stream of points that need to be addressed across disciplines. A case in point is the Third Mission in a regional context at a university that sees itself as a Regional Engine. Or the interdisciplinary, thematic research fields of the Global Climate University, the joint teaching/learning approach of the Learning Concept University, the flexible model of the Online University for Professionals, the citizen science model of the Civil University – all of these call for faculties to join forces.

Higher education and research management must create two conditions to facilitate interdisci-

plinary collaboration. For a start, it must provide the necessary motivation for collaborative work. This calls for compelling reasons, a narrative that allows those involved to identify with the goal in question. Accordingly, it is important to identify, for example, a common theme or concern or to agree on the societal challenges for which the university as a whole is to play its part in coming up with significant solutions.

As well as this, higher education and research management must establish cross-functional structures in the university. A broad spectrum of measures is possible here, including the following:

- Internal financial support programmes for interdisciplinary activities
- Research and transfer scouts who look for potential areas for collaboration internally and bring people together
- An internal facility for interdisciplinary collaboration
- An attractive area on campus where players from the various disciplines can meet to work on common projects
- Appointing a person in charge of cross-cutting tasks
- An interdisciplinary onboarding programme for new additions
- Or communication events like coming together to welcome newly appointed professors, allowing initial contact to be made with the other faculties.

The strongest variant would be the "real" matrix structure where the "product owners" in teaching, research and the Third Mission – rather than the faculties – have access to funding and can "hire" the team members they need from the university's discipline-specific units through a kind of internal job market. Here, the discipline-specific units create a base, but the overall teaching and research is not organised in the faculties but rather through cross-cutting decision-making structures. This kind of matrix structure would, for example, be an obvious choice for the Global Climate University.

(5) *Good higher education and research management must inspire confidence in changes and in the future.* When it comes to major social changes and unravelling certainties, current social discourses tend to focus on possible negative consequences and the problems that result from these – it is rare that solutions are presented and that opportunities are given the same attention as risks. The function of an authentic university – first and foremost through science communication – is to highlight opportunities, convey research-related solutions and to help create a more positive outlook towards changes.

Here, a key function of management is also to communicate the future of their university internally and externally in such a way that the different groups of players can see, from their respective positions, what the university profile means for them. Working towards a future-viable university can also lead to uncertainty within the university

itself to begin with. Take the following example: when a university is evolving towards the Future Skills University model, researchers and academics may ask themselves whether their disciplinary expertise is still valued and needed. Students who are thinking about career opportunities may have difficulty seeing a clear link between studying Future Skills and the labour market. Employers in the region may wonder whether graduates from the university still have the discipline-specific skills they need. Depending on the communication target group, different misgivings need to be met with different responses in order to create confidence in such a development. And especially in the case of external target groups, it is vital for the identity of an authentic university not only to be represented by the management and academic communication, but also that most of the university community identifies with its core values and characteristics and are in a position to say so. When academic and other university staff recognise what future prospects are rooted in the university's identity, then it is easier for them to look to the future with confidence, to help shape this path and to represent it to the outside world.

(6) A *well thought-out participation management system* is an essential part of higher education and research management. Participation at German universities was given a boost by the legal requirement for status groups to take part in university boards. This increased participation but also meant that it veered a little too much in the direction of "work to rule". Even though students

and university staff were formally involved and consulted, professors still had the last word. If participation is only prescribed by the state and implemented schematically by law, this can blunt the university's own creative force (this is also why tinkering with parities in university boards does not automatically lead to more effective participation).

This is not enough for an authentic university. Instead, participation must be a key function of higher education and research management – it must be actively shaped in line with the university profile and have a direct impact on decision-making processes. Participation management should first and foremost reflect the purpose of participation,[52] which has three important functions:

- *Involvement and motivation*: Individuals who have a hand in shaping solutions are more likely to actively support and implement them.
- *Creativity and problem-solving*: The "on-site" players have a knowledge advantage which, paired with creativity, provides the impetus required for effective solutions.
- *Legitimation*: By involving students and university staff and seeking their consent, participation legitimises the outcome of the journey being taken together.

University management should engage in process management with respect to these functions. At what point in a planned countercurrent process (coordinated combination of bottom-up ideas and

top-down decisions) is which of the purposes relevant and which participation instrument fits with each purpose? In a Blended University, motivation comes, for example, from quality meetings on digital teaching, while legitimation comes from a board resolution about guidelines for digital examinations with AI. For instance, a good solution for asynchronous digital elements could result from a workshop in which students and academic staff evaluate the experiences of the coronavirus pandemic together and apply them to the future.

Even if a countercurrent process with participatory elements takes effect, there is still plenty of potential for things to go wrong when it is implemented. For example, university administrations frequently plan highly participatory events and collect ideas from academic and other university staff but fail to communicate afterwards what – if anything – became of these ideas. In such cases, participation is soon seen as a pro forma element without any real purpose. Or to take another example: participation is focused on one group – students, for example – but neglects to include staff in a teaching service centre as well. These and other seemingly minor questions should not be overlooked in a participation context or it will not be possible to involve academic or other university staff in efforts to bring about an authentic university. Universities can only flourish when there is effective interplay between bottom-up ideas and top-down decisions. Participation is more than a legal requirement regarding board structure and is not an antiquated relic of the

democratised "group universities" that emerged in the wake of the 1968 student revolts in the then West Germany. Instead, active, professional and carefully managed participation is a key success factor for an authentic university.

(7) Another success factor is strategic management that strikes *a healthy balance between profiling and quality development/modernisation* (see the distinction made in the previous chapter, Figure 5).[53] A glance at the strategic plans of universities reveals two basic variants and strategic development functions relating to these. Some strategic plans are comprehensive lists of goals and plans of action across all university activities. Such a document can often be more than 100 pages long. In this case, the universities are engaged in quality development. That means that they want to move forward in all areas of performance. In this way, the university advances purposefully but does not set any priorities or develop any clear contours. A strategy that is geared towards profiling is quite different, aiming for visibility and distinctiveness. A strategic profiling plan does not aim to map everything that the university does. Rather, it shows which selected goals are associated with the profile. It is about being able to tell a story – to prioritise and to establish critical mass, priorities and an identity.

At first glance, it appears evident – in view of this distinction – that an authentic university clearly needs profiling. In fact, this would not be enough: profiling alone neglects, for example, the quality standards outside the profile area. Even if, for instance, internationality is not part of a par-

ticular authentic university's core (as with the Regional Engine), every university still needs to have a certain degree of internationality in order to be able to perform quality work. After all, research is not possible without international input. As well as this, innovations can emerge outside the profile area in response to future, unforeseeable changes in certainties. This means that it is vital for strategic management to strike a healthy balance between profiling and quality development because profiling grows out of quality development. By the same token, authentic universities need to create instruments that ensure the right balance. For example, a development plan and a mission statement that clearly convey the vision of the university profile could be coupled with a target agreement process between the university's management and departments that addresses quality development across the board.

(8) Also important is a kind of *profiling that balances different levels*. When examining the concept of an authentic university, it is inevitably the view of the university leadership and the perspective of the university as a whole that initially takes centre stage. However, there are two further decision-making levels where profiling can take place: the faculties or departments traditionally found in a university (or similar subdivisions like "schools", etc.) and the increasingly important level of strategic alliances between universities.

The journey to becoming an authentic university goes through all three levels and can give rise to different yet coherent subprofiles. Take

the following example: a University of Applied Excellence profiles itself overall with its thematic priorities in applied research, but its Professional School positions itself as an Online University for Professionals. In a regional alliance with other universities, start-ups, established companies and Fraunhofer institutes, it profiles itself as a Regional Engine at the same time. The great advantage of alliances is that they can have joint profiles that individual universities would not be able to create by themselves. The different aspects could come together in the university's identity. When an authentic university deals with a wide range of profiling options, there is a horizontal dimension (combination on the same level) and a vertical dimension (combination across different levels). Education and research management is responsible for the decidedly demanding task of balancing this complex question across the various levels. A university's internal structures – such as an extended university management board to include deans, in which strategic questions are discussed – can play a very useful role here, as can management structures for alliance networks.

(9) Higher education and research management with *strong foresight expertise* is another success factor. Foresight expertise means the ability to recognise trends and to predict and understand future developments and changes, and to respond to them early on. Ultimately, the very thing that we are aiming for with this book also constitutes a requirement for university administrations. In most cases, strategic planning has a five-year horizon at most.

But how will conditions for universities change in ten or twenty years? The scenarios and assumptions about the more distant future need to determine decisions made now about the five-year strategy. Universities need the expertise and technologies to think through and evaluate future scenarios in order to be prepared for different realities and to implement them in their decision-making.

For example, ETH Zurich has already created a Strategic Foresight Hub in its university administration team[54] so that it can stay abreast of long-term trends and plausible future scenarios. Its main goal is "to look beyond the obvious". Others include "observing the dynamics of change, challenging preconceived notions of normal and helping to determine the most robust paths of action in an increasingly complex future environment". The foresight methods vary widely, including for example scenario techniques, future laboratories, trend analyses and the Delphi method.[55] On its journey to becoming authentic, a university should be in a position to take on board ideas and thought patterns from this book and use professional foresight methods to develop them further, applying them to the specific university.

(10) Strategic management should *think through each step of the implementation systematically.* Many processes with a strategic orientation at universities are still strong in conception but weak in implementation. Naturally, it is common practice for strategies to be channelled into plans of action. However, implementation needs to go further than this: the profile must be reflected in all

university structures and processes in order to be authentic. An Online University for Professionals can only be said to be implemented comprehensively when, for instance, all administration processes have been digitalised, personnel and service structures correspond to the university profile and an extensive system for crediting skills exists. There also needs to be a study structure with an introductory stage of studies and flexible study modules, as well as fully developed online examination forms for determining skill levels. Also required are mobile working rules for academic and administrative staff that are in keeping with the university profile and success indicators for controlling that fit with the specific goals. Quality management must address specific feasibility questions relating to professional persons wishing to study, and the space and building concept must also be in line with the identity. This example shows that, beyond short-term activities, streamlining the processes and structuring the university are instrumental in anchoring an authentic university effectively.

(11) A further management success factor is an *identity that tolerates deviations*. Let us imagine that a university were to set about becoming a Learning Concept University founded on a problem-based learning concept that does without traditional lectures. And let us also imagine that there are a number of older professors who offer very traditional but exceptionally good lectures that are very popular with students. Naturally, money is invested in problem-based teaching, academic

staff with the necessary qualifications are hired and existing staff are offered further training. However, the university should not wage a pointless battle against "dissenters" who still deliver high quality – this is not conducive to academic freedom. And once again: a profile bundles a university's strengths but by no means subsumes everything.

At the end of the day, there are advantages for universities to gain by tolerating deviations – not just for transition periods but permanently as well – while demanding quality at the same time. Resilience and the ability to change in relation to the unravelling certainties always require universities to have a repertoire of skills and activities outside the core of their profile so that they can respond to new developments. If, on the one hand, the Civil University creates a financial pool to actively encourage service learning, then it should also make available a (maybe smaller) innovation pool for "crazy" learning format ideas that go beyond the current profile. This results in a portfolio of available learning concepts with which the university remains capable of responding to future developments. Innovative-thinking academics, "niche existences", and people who "go against the grain" should be recognised as being valuable for the university if they clearly operate at a high level. A university needs its overall image to remain colourful – a certain degree of wild growth does it good. It would be disastrous for a university profile to be implemented in such a selective and rigid way that there was no room

for people and approaches that were headed in a different direction. Every university should be able to accommodate academics who have completely different areas of focus.

Role of top managers in higher education and research management

However, having effective management at the helm of university leadership is every bit as important for a university as professional management. It is ultimately about people who fulfil a leadership role effectively and authentically – or who do not. To borrow a football analogy, there are coaches who are very good at overseeing star ensembles. Others succeed again and again in ridding players in different clubs of the fear of relegation through working in specific areas. And others still – due to regional roots and family ties – fit with an underdog club with a great team spirit. What this ultimately means is that it is vital to have a good match – not every manager is a good fit for every organisation. The clearer the organisation's profile, the easier it is to find the right management for it.[56] The same applies for an authentic university. A president that is sceptical about digital contexts is not a good fit for a Blended University. But a leading climate researcher would surely be an excellent choice to head up the managing board of a Global Climate University.

But that alone is not enough. In the past, a strong reputation as a researcher was all it took

to justify a largely representative function as head of a university administration. Today, it is a demanding position that calls for strong leadership abilities, management skills and a high level of self-reflection. Having the title of professor is not enough to steer a university towards an authentic profile. General conditions are also relevant here: just like football coaches, a market should form for university leaders. Management careers that span different university levels but also different universities allow the individuals in question to accumulate leadership skills. It must be par for the course for top management at universities to take part in leadership training and coaching. And it must be an obvious, attractive choice for academics to accept a leadership position at certain points in their career and to remain on this track because it is just as attractive as an academic career.

VI. External context: What conditions are necessary

In the previous chapters, we explained why universities need to have a distinct, effective and authentic identity in times of transition in order to be able to exist in the future. We also outlined the journey that would take them there and demonstrated which options exist for shaping organisational structures, processes and management procedures within universities and what role is to be played there by higher education and research management in particular.

We have therefore shone sufficient light on the internal workings of universities, but there is one final key factor to be included in the analysis. A university is not an island – its development depends on a great many external conditions and requirements upon which it has only a very limited influence. This means that a university's development is always an interplay between its own internal capacity to act and the latitude it is afforded by outside factors.

External conditions can make it easier for a university to become an authentic university – or even make it possible in the first place. However, they can also make it more difficult for a university to reach this goal or even prevent it

completely. This chapter deals with the kind of external conditions that are needed for authentic universities to thrive. Once again, the focus is on the situation in Germany, but there are many similarities to other countries. There are essentially three questions that are geared first and foremost towards state actors (parliaments, ministries of science and research) and the institutions they commission (e.g. accreditation agencies, advisory councils):

- *Prerequisites*: What steps can be taken to ensure that universities have enough autonomy and latitude to be able to develop innovative authentic profiles and actually implement them? What steps can be taken to guarantee that a university system is not based on too narrow and delimited a concept?
- *Covering all relevant trends and the controls needed for this*: If only the sum total of different university profiles together is in a position to cover the many societal demands, how can it be guaranteed that all relevant expectations are taken into account sufficiently and that not all universities are focusing on the same trend?
- *Transparency and orientation*: If university profiles are becoming more and more diverse – with previously unthinkable approaches possibly also becoming reality – how will prospective students find their way in this highly complex brave new university world?

Open-ended understanding of universities

In Germany, the primary responsibility for universities lies with the 16 federal states, which determine matters of education and culture themselves. Accordingly, the extent to which universities and UASs are able to implement their clearly profiled identity authentically depends largely on the legal framework, which is defined differently by the various federal states. The minimum requirement for effective state regulations and controls would be to have no hurdles or inconsistencies. Here is a specific example: the latitude for innovative profiling depends greatly on whether a clearly profiled university is actually (still) a university in the eyes of the state. For instance, if a university is largely based on the concept of a Certification University, it stands to reason that this question should be asked – because it calls the previous model into question too radically.

Traditionally, the image of a university has been determined, among other things, by the following attributes, which are seen as being constitutive (some of these also still play a role as assessment criteria in procedures such as the institutional accreditation of private universities in Germany[57]): permanent employment of a stable academic core of full-time professors who have at least a doctorate and have research to their name; suitably equipped rooms; a target group of young adults with formal university entrance qualifications acquired in secondary education; and institutionally guaranteed freedom of research and teaching.

Apart from the last attribute in the list, the above examples cast a doubtful light on all other aspects when we look at possible profile types: the Certification University does not employ any academic staff, the Guidance University has more of a need for learning coaches and the Online University for Professionals has virtually no buildings and a different target group. In other words, the traditional attributes point more towards the past than the future. This classic idea of a university is restrictive, anachronistic and no longer suitable as a benchmark. Clinging to it nonetheless would constitute a seriously difficult barrier to surmount on the journey to becoming an authentic university.

Setting a university apart from other institutions needs to be more open-ended and results-oriented. Inventing further types of higher education alongside universities and UASs would not work because the described developments are too diverse. "What is a university?" is not a question that should be answered based on input categories (Is the library sufficiently equipped? How many square metres does the campus measure?). Rather, the question is whether the relevant institution is able to meet the overall core objectives of universities. Among other things, this could relate to the following aspects:[58]

- Are students provided with the skills needed to examine – in dynamic environments – questions that are not yet known today and to do so in a way that is independent, scientifically sound and with a verifiable methodology?

- Are students provided with the skills needed to understand and classify research methods and findings?
- Do the universities have an education strategy, curricula and quality management systems that ensure that the intended qualification goals are reached?
- Will graduates be sure of gaining employment?
- Does the research meet the academic quality standards?
- Do the university's activities have an academic and societal impact?

Accordingly, the German federal states and the Science Council (*Wissenschaftsrat* – the body among other tasks responsible for the institutional accreditation of non-state universities for the German federal states) should use as a basis an "extended definition of university" that gives the term a new and more variable scope derived from this overall core. The discussion about an "extended definition of family" can be taken as a model here. This arose from the need to adapt the traditional concept of family to new and more diverse societal realities. The core idea of a "family" being a place where long-term responsibility is taken for other people in a private environment remains constant but is applied flexibly to additional ways of life. Just as the "extended definition of family" has changed from describing the implementation (In what model should a family be implemented?) to describing the objective

(What is the core goal of a family?), the "extended definition of university" should also be formulated with specific goals in mind.

If this route is taken, the profiles described in Chapter IV will not be at odds with the defining attributes of a university. Any institution that follows the aforementioned twelve development trends and meets the above criteria will be able to reach the threshold for being a university. These considerations are also important for procedures such as the institutional accreditation of universities. Again, these should not base accreditation decisions primarily on a university's superficial, form-related attributes but rather on well-founded projections relating to the goals it achieves – in this way, they will not stand in the way of a differentiated profiling. This normative understanding will help to create the necessary latitude for authentic universities.

No authenticity without autonomy

There is also less scope for universities to profile themselves if the federal state in question continues to stick rigidly to old certainties and, for instance, refuses to grant UASs the right to award doctorates independently – which is scarcely a way to create a University of Applied Excellence. For example, the profile of a European University presented above can only be implemented in its full scope if a supranational legal framework is available that can exist independently of

national legislation in different countries. A Certification University would not automatically be possible under the regulations that now apply, since it would have no chance of passing the accreditation procedures that currently hold sway. And Blended University models are still being hindered by instruments such as the German capacity regulations and regulations for teaching responsibilities – this is because these measures in Germany were developed for in-person teaching and are not compatible with the particularities of online teaching. An authentic university can only succeed with a high degree of academic, strategic, organisational, personnel and financial autonomy.

The scope for universities is also restricted when the federal state in question expects all universities to "tick all the boxes" and contribute to almost everything a university is able to offer. This can especially be seen when a federal state sees target agreements with the universities as a kind of checklist where all federal state targets are to be ticked off one by one. Instead, universities should have the freedom to select and prioritise their areas of activity in the university-specific target agreements (higher education contracts) with the ministry. Target and performance agreements must also accommodate additional, university-specific targets as long as these do not conflict with federal state planning. This means that using controlling and steering instruments correctly is also an important framework factor.

In our view, this is the minimum that is required of state control and frameworks. However, it is not enough for the state merely not to get in the way of innovative solutions and profiling approaches – it is better for the federal state or other state players to actively pave the way for these and to provide positive incentives for developing relevant new identities. If the European Commission makes the idea of European University Alliances a core component of its strategic agenda and funding policy, this naturally increases the probability that the European University will become an important form of some authentic universities.

In 2020, the Hessian Ministry of Science and Research, Arts and Culture introduced a format for "strengthening the strategic capabilities of Hessian universities" by verifying priorities and USPs as part of an overall strategy. If a federal state earmarks funding in this way and initiates a peer-reviewed process for prioritising and profiling, this can be expected to help make universities more authentic. Another excellent instrument for promoting authentic universities is a legal experimentation clause that makes it possible, in justified cases with state approval, to explore university profiles outside the scope of current statutory regulations. An example at federal state level is the "development clause" (*Weiterentwicklungsklausel*) in Baden-Württemberg federal state university law (section 76(1)).

Federal state planning versus university planning

The function of the German federal state ministries of science and research is to oversee the federal state's entire university system. In doing so, they should resist the temptation to (once again) feel responsible for every single element – but they are very much responsible for the university system as a whole. Their role is not to get involved in the nuts and bolts (such as approving details about study courses and capacities – after all, how can authenticity be expected to develop then?), but rather to determine the overall framework. As we have seen, university identities should ideally set themselves apart by latching onto significant societal trends and expectations relating to universities. Here, governmental policy has the function of identifying both general objectives and societal expectations and requirements, and then conveying them to the universities. Specific innovations could be promoted by state funding programmes. Generally speaking, however, federal states should observe at arm's length whether universities and UASs identify and respond to trends and needs of their own accord.

Here, the federal states should maintain a strict balance between their own central strategic framework and the universities' decentralised planning. It is possible to illustrate, based on the process for differentiating university identities, how a federal state should (or should not) go about its planning. The federal state should not dictate that all universities must focus on a specific trend in their

profiles. As well as this, profiling should not be subject to approval in general. Any interventions that go beyond moderating, coordinating and – where appropriate – fine-tuning the mixture of authentic identities should be avoided.

We can use a musical analogy to illustrate the relationship between the federal state and universities: the state should not see itself as a conductor who decides on a composition, has the relevant sheet music distributed among the orchestra and then controls the tempo rigorously with their baton. Instead, the federal state is more like the bandleader of a jazz combo that suggests basic leitmotifs and then waits eagerly to see which musicians approach which motif creatively, how the musicians interact with one another and how they interpret different leitmotifs in their own way – or come up with entirely new motifs in the course of a performance. A conductor gives the orchestra clear instructions – based on the sheet music – about when which groups of instruments should make their specific contributions to the overall sound. In this case, divergent elements, creative reinterpretations and interactive add-ons are neither intended nor welcome here. By contrast, the bandleader of a jazz combo is able to tolerate not having everything under control because they depend on a fundamental level on the creativity of the musicians and trust in their inventiveness. A federal state should rely on the creativity of its universities in exactly the same way. It should not succumb to the temptation of designing and implementing a grand plan for all

universities itself. Federal state planning does not replace university development planning – rather, it establishes a general framework for universities' internal planning, suggesting "leitmotifs" in the form of development trends or principles. But then it is up to the universities to arrange and build on these motifs authentically.

The ambiguous role of the federal government

As well as the federal state ministries of science and research, in Germany, the Federal Ministry of Education and Research (until 2025 called BMBF) plays a key role. On the one hand, the federal government has set many wheels in motion by providing specific incentives. Many invigorating pushes for change experienced by German universities in recent years can be attributed to the innovation and financial potential of the BMBF. Here, BMBF regularly proved itself to be adept at actively identifying trends and at driving and facilitating innovations. Even though there was room for improvement in the details, the "excellence initiative" (now known as the "excellence strategy") promoted and rewarded strategic capabilities and clearly defined goals. Even when no support was provided to those who did not succeed in the competition, it still had a certain effect on participating universities because it led them to reflect on their own identity and to make changes.

At the same time, there is no denying that there are impediments on the federal government

side as well. With the German Higher Education Framework Act (HRG), there is still a federal regulation on the books that has remained untouched by the changes of the last twenty years (apart from elements deleted following the reform of the federal system) and that is well behind the times. For example, the HRG still refers to the long defunct *Zentralstelle* (central unit) that used to award university places and to the inclusion of the letters FH (for *Fachhochschule*, i.e. university of applied sciences) in certain degree titles. Thankfully, the rudimentary HRG is largely ignored as a relic of past times and never really gets in the way.

By contrast, the federal government's slavish adherence to line-item funding is a real problem: federal funding invariably comes with the traditional earmarking of funds and detailed reporting obligations that are meticulously inspected by project backers and ultimately by the Federal Audit Office as well. While the federal states have more or less consistently switched over to financial autonomy and lump-sum budgets, the federal government is still mired in line-item funding. For example, while federal state regulations set aside reserves or unexpended budget appropriations (as an important steering instrument in rational financial planning, an expression of efficiency and a part of risk management), such reserves are still interpreted by the federal government as a sign that the funds were obviously not needed and that things were being badly managed. This inconsistency and hindrance to

financial autonomy is a massive restriction on the flexible use of funds and, in turn, on authentic universities' strategic capabilities and their capacity to act. Given their mixed financing, universities are faced with the challenge of having to deal with two entirely different financial worlds at the same time, each with its own specific logic.

The federal government's budget management urgently needs to make the move into 21st-century university finance management and to add university-specific requirements to the federal budget code. The Academic Freedom Act (*Wissenschaftsfreiheitsgesetz*) – an academic-specific financial regulation at federal government level – has existed since as far back as 2012. This offers non-university research institutions extensive autonomy and flexibility and also provides a good guide for the university sector, as does the latitude for the Federal Agency for Breakthrough Innovation (SPRIND) that was decided upon in 2023.

Reliable financing

State universities that wish to authentically represent a clearly profiled identity urgently need financial planning security. Even if increased financial resources were naturally to open up new possibilities, the German universities were well positioned as regards financial latitude over the last years: the federal states' financial models are largely based on stable basic financing, calculable financing formulas and target agreements. In a

number of federal states, financing for the university system as a whole is guaranteed for multiple years through framework agreements, in some cases also with defined growth rates. Programmes are being set up for new developments such as digitalisation or AI (all of which, of course, varies between the 16 federal states). It is also important to bear in mind that the possibility of reserve accumulation that is open to universities in quite a few federal states significantly increases their ability to plan. In several states, critical budgetary situations now start to induce cutbacks (for instance, in Berlin, with severe volumes); how this continues to develop still has to be seen. For its part, the federal government – with its university pact (*Hochschulpakt*) and future pact for studies and teaching (*Zukunftspakt Studium und Lehre*) – ensured that financing would be guaranteed even if the number of students were to rise. All in all, these are still rather good conditions for being an authentic university, albeit with three systematic limitations:

- Innovative developments at universities are often financed through short-term programmes, which makes it difficult to establish a lasting profile and also leads to the aforementioned phenomenon whereby universities have to participate in all relevant competitions. To return to the above identities: the federal programme "Innovative University" (*Innovative Hochschule*) and new funding opportunities in the context of regional innovation ecosystems help univer-

sities to get closer to the profile of a Regional Engine. By the same token, funding from the EU and DAAD can help a university to become a European University, and a university that wishes to profile itself as a Learning Concept University would surely benefit from funding from the Innovation in Higher Education Foundation (*Stiftung Innovation in der Hochschullehre*). However, none of these sources results in reliable long-term financing. In the case of the "excellence strategy", an option for long-term safeguarding additional financing is now – with good reason – on the table; something similar should also be put in place for other profile types.

- Another factor getting in the way of reliable financing is that the financing option of charging study fees as "third-party funding for teaching" is not open to state universities in Germany. This limits the diversification of both the financial basis and the default risk (although in the case of study fees, this is just one of many implications and this instrument needs to be evaluated in greater detail).[59] It is also not usual for state universities in Germany to finance investments with a long-term payoff – e.g. ambitious growth plans or energy-efficient building renovations – through loans, or via the capital markets or bond issues.
- The greatest problem in Germany is probably obtaining reliable financing for properties and construction. Authenticity has a great deal to do with the way a university's campus

is designed – the Learning Concept University and Blended University will both want to implement their respective concepts in their interior designs. Experts agree that there is an enormous investment backlog in this area and that there is no guarantee that there will be sufficient finance available to address this. What is decisive for authentic universities is that this aspect is being thought through financially, going beyond merely preserving the status quo (not even that has been safeguarded to date).

The problem of financing individual studies

The federal government so far also remains stuck in the past when it comes to student funding, an area for which it has sole responsibility. At least 84 percent of students were not able to or did not want to make use of the support offered by the state for financing their studies in 2022 – that is five out of every six students.[60] This is mainly because two formerly very important state programmes are in crisis: KfW student loans (KfW = German Development Bank) no longer offer attractive conditions and the Federal Training Assistance Act (BAföG) is increasingly incompatible with real life. This is because BAföG is based on a traditional understanding of students (studying full-time right after finishing school, in standard study time, without fees) and ignores the fact that the university world has long since moved on. Almost 12 percent of students in Germany are en-

rolled in a fee-paying private university. Around 67 percent of students in Germany do not complete their studies in standard study time. Part-time studies are now a well-established modern option but are not eligible for funding. Orientation semesters and certificate studies (*Zertifikatsstudien*) are booming but are not supported by the BAföG.

Being forced to continue with the BAföG's outdated norms is a limiting factor for authentic universities because the continued existence of anachronistic certainties gets in the way of innovative approaches like CAS/DAS study programmes or innovative introductory stages (to studies) and part-time study programmes. Profile types like the Online University for Professionals or the Guidance University are particularly affected by the limited options that are available for financing studies.

The BAföG urgently needs to be brought in line with its original goal: to give people opportunities, to make the process easier and to make education decisions less dependent on the financial means of prospective students or their families and on their parents' attitudes towards higher education. What is needed is a "new" BAföG that accounts for different eventualities, personal situations, educational biographies and study models.

Focus on post-school education in general

As federal state and federal government policies are responsible for education in general, the

university system cannot be viewed in isolation from other areas of education. The traditional division between academic studies and professional training is becoming increasingly blurred. More and more prospective students want the best of both "worlds" (although the increasing permeability is largely only evident in the direction of academic studies at present). In view of this, federal state and federal government policy needs to base its framework and incentives on an overall view of academic studies and professional training together. When post-school education is seen as a networked system and communicated by policymakers as such, the interfaces will become clearer and more significant. Taking an overall view like this is elementary for universities whose identity is found in the grey area between academic studies and professional training, one example being the Tertiary Educational Institute discussed above.

Take the following example: at present, when students change from professional training to academic studies or vice versa, there is no real formal routine for recognising their previous achievements in the other subsystem of post-school education. Both when integrating prospective students with professional training into the university system and when recognising the academic achievements of people who have started but not completed university or of graduates in professional training courses, those wishing to "change sides" have to date usually been treated as isolated cases – with all the uncertainties that this entails for them. Here, there is an urgent need for indi-

vidual "beaten paths" that provide a reliable and standard means of entering or changing between either side, safeguarded by a state framework.

One very important aspect – not least for the Guidance University and Certification University models – would be to set general legal standards relating to access and transfer regulations and to crediting and recognition procedures for individual stages of education. This would force a functional link between academic studies and professional training and allow greater planning security and predictability in the case of education decisions. For this, it is vital that a common "currency" be established as standard in professional training as well, based on the European Credit Transfer System (ECTS) that has proved its worth in higher education.

Ensuring transparency and orientation

A university system that consists of authentic universities is a colourful and diverse one. But even at this early stage, differentiating courses of study and university profiles already leads to a far greater diversity of options that are difficult to distinguish at first glance and whose USPs are not always immediately clear. This creates a number of challenges for prospective students.

Here, it is vital to ensure transparency and orientation from two directions: firstly from a demand perspective, i.e. coming from individual prospective students and their information needs,

and secondly from a supplier perspective, i.e. how the profiled university identity can be illustrated to possible target groups.

Orientation through user-centric advice on academic options

To illustrate how educational biographies should be aided through greater transparency, let us use an analogy based on popular smartphone apps. For instance, cookery apps turn the previous logic on its head: rather than going shopping for the ingredients listed in a recipe, you take the ingredients you already have as the starting point. The innovative approach is: "Tell me what you have in your fridge, and I'll tell you what you can make with it." By the same token, mobility apps are no longer limited in the way that bus and train schedules used to be by transport associations, fare zones and changing jurisdictions. The focus is now squarely on users. The new maxim is: "Tell us where you are, and we'll tell you how to reach your destination." Whether the individual stages are then by train, rented e-bike or e-scooter, car-sharing, ferry, bus or on foot – the mobility app draws on all kinds of options, recognising transitions and available connections and combining everything into an unlimited overall picture geared towards the individual user.

In future, advice on academic options should take the same modern, innovative approach as the cookery or mobility apps described above and

transfer them to post-school education. Four basic design principles are key here; the advice should take an integrated, user-oriented, motivating and holistic approach:

- Integrated approach: Advice on academic options should show the comprehensive range of academic studies and professional training on offer. As we have seen, individual educational paths increasingly combine elements from both "worlds" of post-school education. This means that any information and advice provided to prospective students to help them make their decisions should, irrespective of the various responsibilities involved, reflect the overall picture of post-school education and guarantee independent advice.
- User-oriented approach: Advice on academic options should begin at users' individual starting points, depending on their individual orientation regarding the rough direction they wish to take (perhaps using interest tests). The "stocktaking" for users should be based on their individual educational biography to date (degrees, certificates, skills certificates, etc.). In this way, for example, users could be made aware of the possibility of the skills they already have being credited at an online university. Or that the certificates that they received from a university that they attended part-time while working can be bundled into a greater qualification (or partial qualification) with minimal additional effort. Advisors on academic options

could also point out to (prospective) students that skills acquired during their studies can be credited towards professional training. And just like a mobility app, where the map reacts flexibly and takes users in all directions (always centred on them), advice on academic options should respond to changed starting points and have constantly updated orientation regarding possible academic paths and suitably profiled universities.

- Motivational approach: The traditional view asks, based on a professional goal that (prospective) students are aiming for, what they have to achieve and demonstrate to be able to actually reach it. Effective advice on academic options should also focus on the question "What else can I do with the things I have earned and achieved to date?", i.e. looking for follow-up options and suitable subsequent goals, but at the same time taking into account and highlighting what has already been achieved.
- Holistic approach: Advice on academic options should contain further information on clearly defined follow-up steps, for instance references to educational institutions' websites and contact details. It should also provide information on the costs associated with academic paths (to allow a cost-benefit analysis to be carried out) and on questions relating to accommodation or financing studies. It should also integrate established instruments like interest tests and aptitude tests with information on earning potential, working times and on striking a healthy

balance between working and family life. Of course, advice on academic options should also provide, in a suitable way, transparency regarding the university profiles. The more universities differentiate their identity profiles, the more crucial it is to have a good match between individual demand and institutional supply. The university system of the future is a complex entity.

- A single authentic university cannot provide these approaches comprehensively even though Guidance Universities would take on such functions as part of their core mission. An ideal outcome would be universally accessible information that has been prepared according to the logic described above and that is made available either privately or by the state. This information should be available to all prospective students regardless of their financial background, and any advice provided should be unbiased.

Transparency by presenting profiles in multi-dimensional form

A university's profile needs to be clear to prospective students and cooperation partners so that they can identify it as the "right" university for their interests. If, for example, a prospective student has roots in a particular region and would like to acquire qualifications that would secure them employment in the local labour market, they would need to determine whether the university sees

itself as a Regional Engine locally and is geared towards the specific need for skilled labour there or whether it tends more towards addressing global trends and, to this end, prefers to aim for international cooperations.

How do prospective students find the university that fits with their preferences? How do academics find the university that matches their values, needs and the issues that interest them? There can only be a good match when tools are available that create transparency for those involved. Here, orientation must be provided via both dimensions explained in Chapter III:

- On the one hand on the horizontal level, which maps different profiles, task priorities and main areas of focus,
- and on the other hand on the vertical level, representing the differences in quality and performance for comparable profiles.

But what tools are suitable for this? In any case, traditional rankings are a wholly unsuitable instrument for mapping diversity. A league table with a ranking would have a positioning based on an aggregate score comprising different indicators. The producer of the ranking selects these metrics and weights them based on how important they feel them to be – for example whether third-party funding or publications are more closely correlated with success in research. Rankings such as the Shanghai or QS Ranking (Quacquarelli Symonds = QS) either primarily or exclusively rely on indi-

cators relating to research; nonetheless, the league table aims to identify the best universities (because the UAS profile does not count here) in the world.[61]

This approach is absurd: the universities are diverse but the assessment criteria are not. In the familiar global rankings, all universities are measured against the Harvards and Oxfords of this world even if they are more accurately described as regional universities or applied universities on the horizontal level. The University of Applied Excellence described above stands no chance at all if its success is measured based on classical citation indices.

In other words, league tables are not conducive to differentiating the university systems because many profiles will not be transparent. In a truly diverse university world, rankings that calculate a league table placement are an instrument of disinformation. What is more, league tables create an incentive for universities to have monocultures rather than multifaceted excellence. Different profiles do not have the same chance of developing.

The most suitable approach for creating a transparent system of authentic universities is to display multi-dimensional performance profiles. Such an approach has already been developed in the U-Multirank ranking system on behalf of the EU Commission and tested for more than ten years.[62] Since 2024, this approach has been continued in the European Higher Education Sector Observatory (EHESO). A web tool was developed in connection with U-Multirank in which a subgroup of universities with similar attributes can initially be

selected from a large number of universities. A multi-dimensional performance profile is then offered for this subgroup with over 30 indicators for each university as a whole and over 40 indicators at individual discipline level.[63]

There are five dimensions in U-Multirank's performance profile: teaching, research, knowledge transfer, international orientation and regional engagement. Needless to say, these dimensions do not yet map all profile attributes completely either, but they do cover key university functions. Research indicators fit well with the Grand Challenge University, knowledge transfer is particularly significant for the University of Applied Excellence and the indicators for regional engagement measure the performance of the Regional Engine. This approach allows diverse profiling to be described to a great extent. U-Multirank's multi-dimensional approach is inextricably linked with the message "there is no such thing as the best university" – rather, it is only possible to name the best university with reference to the respective elements in the profile. Any transparency approach for authentic universities would need to be along these lines. It would be important for authentic universities to go beyond the described standard set of indicators and make their own very special profiles clear by adding their own indicators. For example, the Guidance University would certainly have to look into measurement concepts for consulting quality, while the Future Skills University could operationalise its performance through expertise assessments.

University councils - a bridge into society

One other condition for authentic universities that should not be overlooked is the input that comes from interacting with the universities' stakeholders. Such interaction is instrumental in finding relevant trends and profile types. The many possible forms of a stakeholder dialogue are illustrated by the role of the university council. Universities that want to become and remain authentic are scarcely conceivable without a university council (the term *Hochschulrat* is mainly used but in some federal states, a university council is known as a *Stiftungsrat*, *Universitätsrat* or *Kuratorium*). A university council provides the benefit of its predominantly external perspective – with practical ideas and successful work – in defining and designing a clearly profiled and authentic identity:

- *Facilitating and safeguarding a more state-independent governance*: Profiling only works when universities have enough creative latitude. However, the state can only withdraw from university management and grant extensive autonomy to a university if it can transfer supervision and control to a body in which the majority of members come from outside the university. As a "buffer institution", the university council allows a university to detach itself from detailed ministerial steering and functional supervision and to have a high level of independent responsibility in budgeting and personnel. It is actively involved in electing the university

leadership, controls finances and risks and, in this way, legitimises the university's autonomous decisions.

- *Strategic advice*: A university council takes an overall view of the university and helps its leadership to advance the university's overall development. It enhances the university's strategic orientation and decision-making capacity with an independent perspective but without an internal proportional representation mindset or one-sided interests. For the most part, it does this by asking the "right questions", by calling for a strategy for the institution as a whole and by examining how this is implemented. Under no circumstances does it develop a strategy itself.
- *Reflection on relevance*: A university council is committed at the same time to the good of the university and to the university's duties towards society. As a sounding board and "bridge into society", it helps the university to take responsibility in and for society.

This is the ideal. However, a university council can only provide adequate assistance to authentic universities – or those in the process of becoming an authentic university – if the federal states design a suitable legal framework for university councils. As well as this, universities need to appoint suitable members to the university council and, in its capacity as a "critical friend" and counterpart, involve it in key decisions. For their part, the university councils themselves also need to examine and

define their interpretation of their role and what it involves. In doing so, all those involved can gear themselves towards success factors that have now been identified.[64]

The vital importance of all players working together

Key external conditions have been described individually but it is the interplay between all internal and external factors that determines whether a situation as a whole is advantageous or difficult for authentic universities. When creating a world-class university system out of a diversity of authentic universities, all players must pull together.

- Universities require courage, creativity and professional education and research management to be able to go their own individual ways and to develop and implement an authentic profile.
- Federal and federal state governments must provide universities with the requisite autonomy and offer them reliable and differentiated financing perspectives. They must base their university policy and accreditation procedures on an open-ended definition of what a university is. They must promote diversity through their steering instruments, take an overall view of academic studies and professional training as complementary parts of post-school education, and refrain from using simplistic league table rankings as a benchmark for their decisions.

- The university stakeholders must articulate their expectations and channel these into the universities' profiling processes through cooperations or through involvement in the university council.
- Providers of transparency tools (innovative rankings or benchmarking systems) must make it possible for diversity to be measured and traced through multi-dimensional approaches.
- User-centric advice must enable prospective students to make well-founded decisions regarding their further academic paths. The state must guarantee financeable studies via a state-subsidised study financing system.

VII. Final checklist: How authentic is my university?

In this book, we have tried to describe which upheavals are currently taking place and how universities can secure themselves a positive future. We hope that we have succeeded in making the case for authentic universities.

Rather than concluding by summing up our position, we feel it is more useful to provide readers with a checklist that will allow them to determine just how authentic their own universities are at present. Many German universities are already well on the way to achieving authenticity. On the basis of 21 questions, university members can reflect on how authentic their university already is and what they still need to do to attain an authentic university profile. The questions are structured based on the three steps illustrated in Figure 2: Profile – Identity – Authenticity.

Do we already have a clear university profile?	
1. With a view to achieving a USP (Unique Selling Proposition), we have consciously set priorities (e.g. priority target groups, subjects or goals) relating to and within the core mandates (teaching, research and Third Mission/transfer).	☐
2. We have consciously set priorities that shape the university as a whole (e.g. a primary theme, a regional or international orientation and/or a particular value orientation).	☐
3. Our university council provides valuable support for our journey to becoming an authentic university.	☐
4. We could, by means of an "elevator pitch", convey the key strengths and profile-shaping attributes of our university while travelling from the ground floor to the eighth floor.	☐
5. We have defined strategic development goals and could provide an impromptu five-minute summary about where our university should be in ten years' time.	☐

Do we have a clear university identity?	
6. We can rely on our university community actively supporting our profile and reflecting it in their actions at all times.	☐
7. We have developed a set of indicators for monitoring the implementation of the university profile and gauging its quality, output and impact based on benchmarks.	☐
8. If prospective students ask why they should choose to study at our university, we can illustrate clearly, using an anecdote, what sets our university apart from others, what constitutes our unique spirit and how we put it into practice.	☐
9. We can demonstrate right away that our university's identity not only exists on paper but is also reflected in the organisational culture (e.g. in values, norms, symbols and rituals).	☐
10. Specific key issues, basic beliefs and basic roles have emerged which, as the core of our identity, are of great significance for the university and guide our actions.	☐

Have we reached authenticity yet?	
11. We have dealt with the overarching trends behind the unravelling certainties. We are clear about which of these pose a particular challenge to the university and call into question our practices to date.	☐
12. We have thought about where we should respond to the new realities – and where there are good reasons for our university to hold on to traditional certainties.	☐
13. We have worked out which trends, needs and expectations fit well with our identity and determined the resulting opportunities that we want to seize in the next three years.	☐
14. We have given thought to the areas where unravelling certainties are increasing the scope of what is conceivable and feasible for profiling and forming an identity and, in this way, opening up new possibilities for ourselves.	☐
15. The local relevance of our university is clear: our partners and stakeholders know how important the university is.	☐
16. We have compared our profile and our identity with our context/stakeholders and we are clear about the current societal questions and challenges for which our university is developing clearly defined solutions.	☐
17. We consciously develop and communicate constructive contributions with a view to providing orientation and a new sense of security in uncertain times and to increasing optimism and confidence.	☐
18. Our education and research management is in a position to deal professionally with uncertainty and changes – for example through strong foresight expertise, participation management and teamwork between different disciplines.	☐
19. We have established mechanisms to review our profile cyclically and to update it if necessary.	☐
20. Where local changes and new realities call our previous actions into question, we respond (in some cases also with major changes), but we also retain the core of our identity – this is because our core identity provides us with a compass that allows us to accept changes with motivation and confidence.	☐
21. People outside the university regularly indicate to us that they are clear about our identity and see it as being coherent, genuine and credible.	☐

Figure 7: An aid to ascertaining the status quo

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