

# the Learning Laboratory Experiment

Seeking effective change in higher education

$$L_e = mc^2$$

## how it all started:

- ◆ President Casper's challenge to the **Commission on Technology in Teaching and Learning** '94 stressed the following factors as **requirements for preeminence** in 21st century higher education:
- ◆ **technology** must be used to attract, retain and engage the **brightest and most diverse student community**;
- ◆ **technology** must be used to assure that these students have the **finest possible learning experience**; and
- ◆ **technology** must be used to **forge new world wide partnerships** with industry, government and educational institutions;
- ◆ it is upon the work of this commission, and upon its recommendation, that the **Stanford Learning Laboratory** was founded in May '97.

# Our charge

- ◆ Identify the **challenges** presented by new technologies to the normal way the university does its business ;
- ◆ Devise an **integrated solution** to these challenges that takes into account both technical development, pedagogical values, institutional stability and traditions.
- ◆ Create **solutions that are practical**, easy to disseminate, cost-effective, and that maintain Stanford's high level of excellence in teaching and research;
- ◆ Create **partnerships and alliances** both within and without the university that will enable these solutions to work;
- ◆ Expand ways that the university can **serve/penetrate non traditional areas of education**

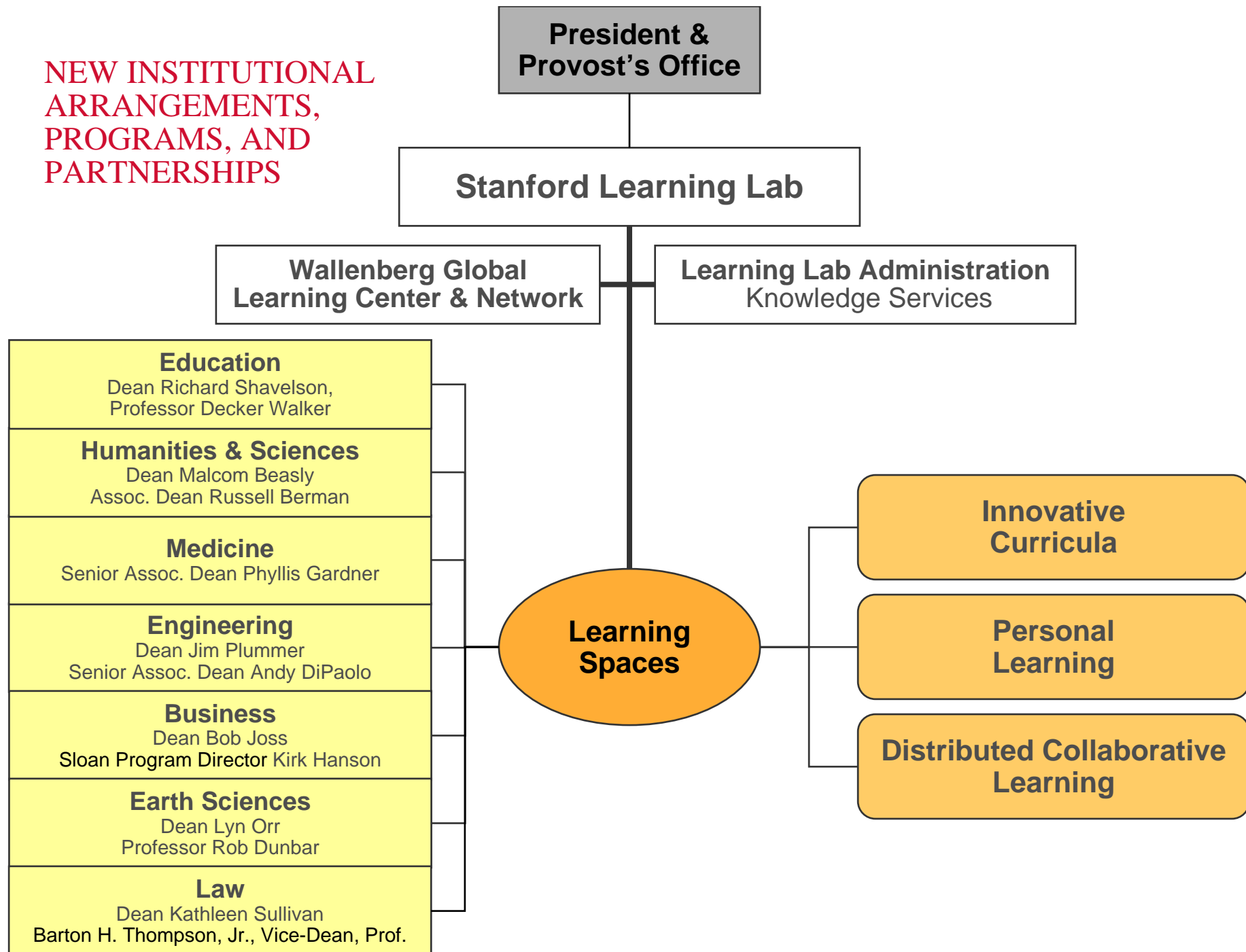
# applied learning R&D strategies

- ◆ in the learning space,  
we build products (tools and services) for the institution
  - ◆ physical learning spaces to be designed to shape user behavior in favor of desired pedagogy and learning practices.
- ◆ in the personal learning,  
we build products (tools and services) for students.
  - ◆ electronic portfolios to capture, organize and re-use personal and communal learning.
- ◆ in the innovative curriculum,  
we build products (tools and services) for the teacher.
  - ◆ new curriculum structures and media to improve teaching effectiveness and to adapt to emerging disciplines
- ◆ in the distributed collaboration,  
we build products (tools and services) for our partners.
  - ◆ collaborative learning tools and services.

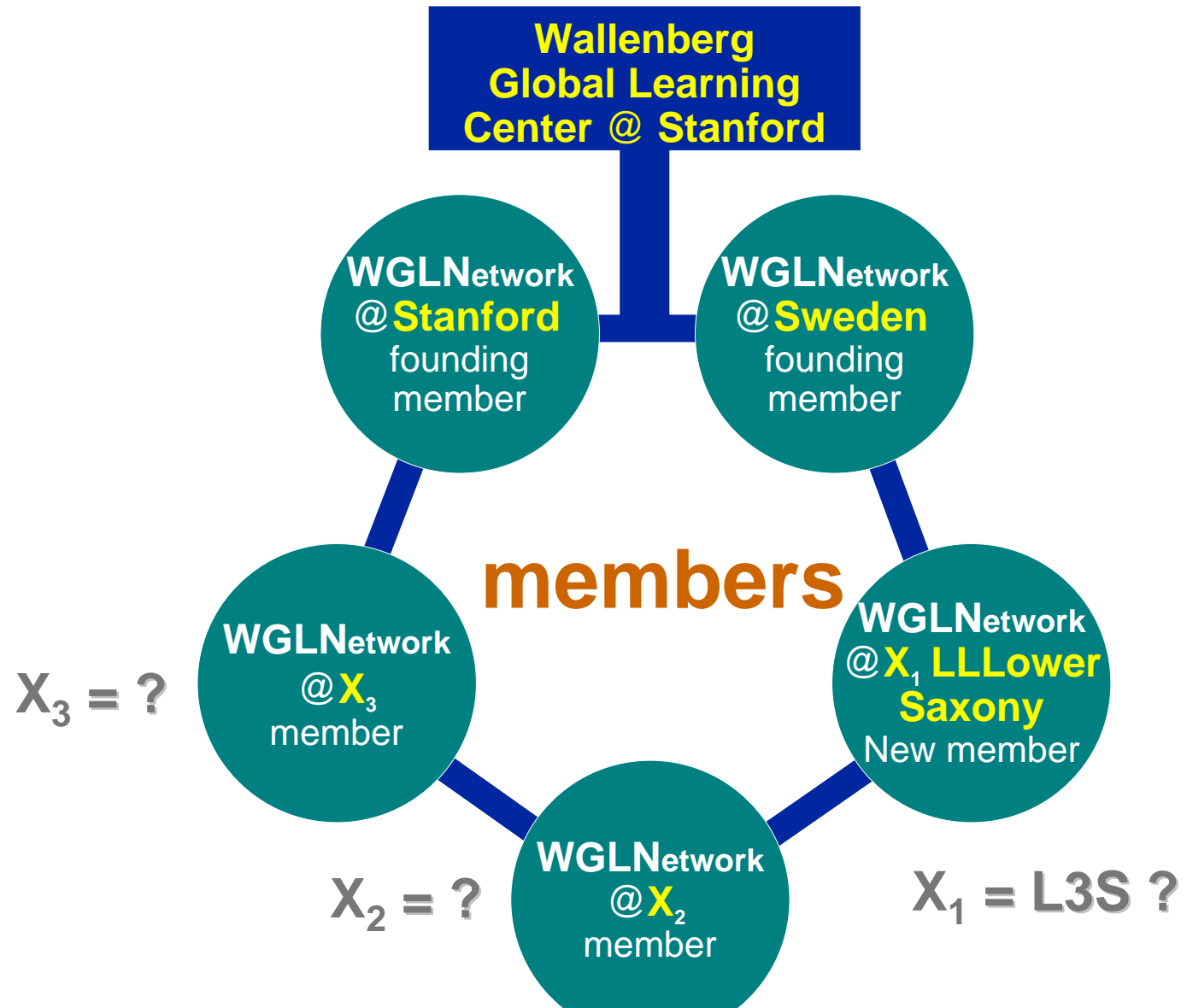
# Pedagogical agenda

- ◆ Create community, and peer to peer connection
- ◆ Provide personalized attention and remediation for students
- ◆ Provide faculty with quick feed back on course and student performance
- ◆ Integrate field research and project activities with formal instruction
- ◆ Exploit the sense of place and the resources provided by distributed environments

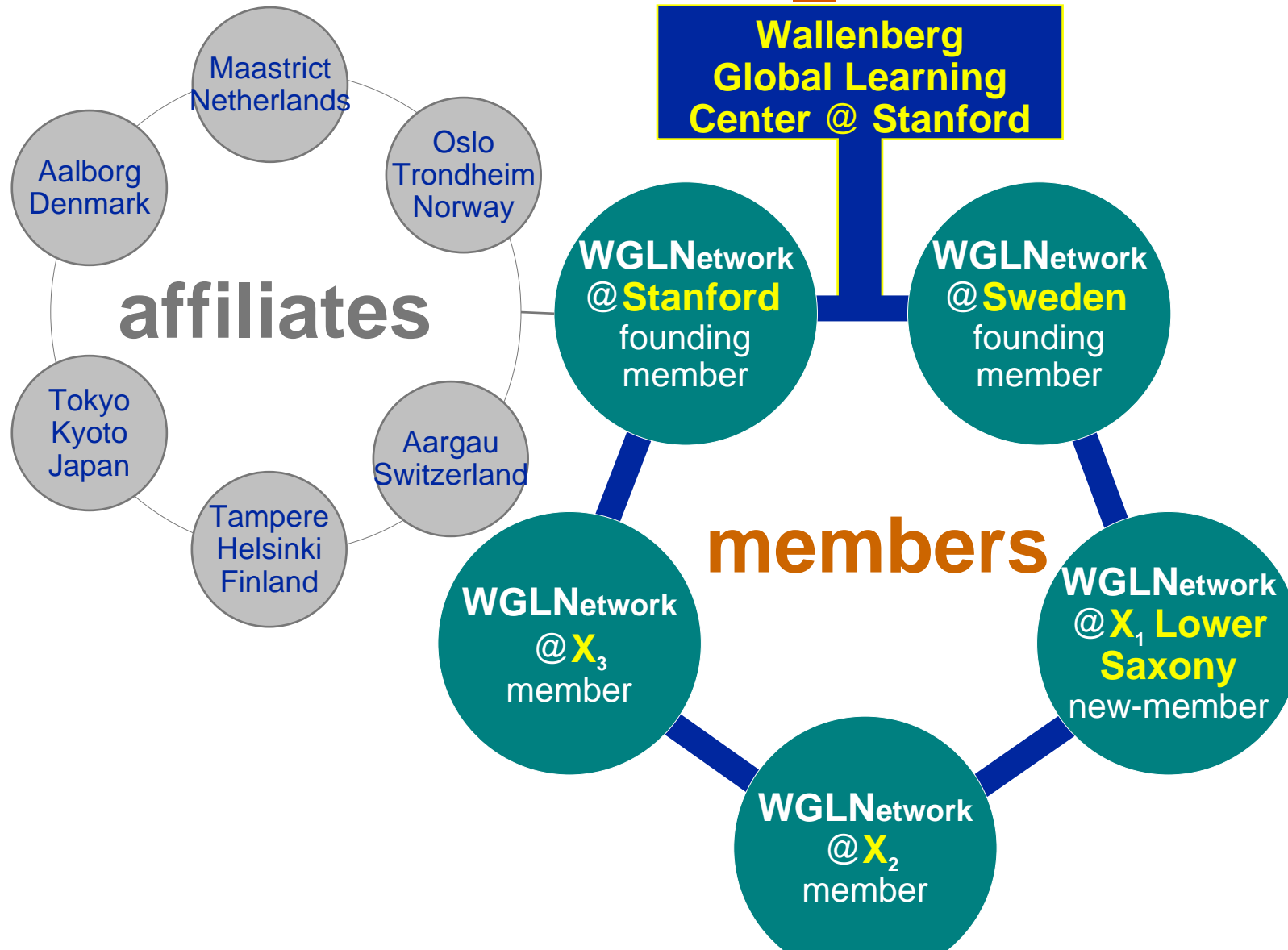
## NEW INSTITUTIONAL ARRANGEMENTS, PROGRAMS, AND PARTNERSHIPS



# CREATING A GLOBAL NETWORK OF UNIVERSITIES AND RESEARCHERS

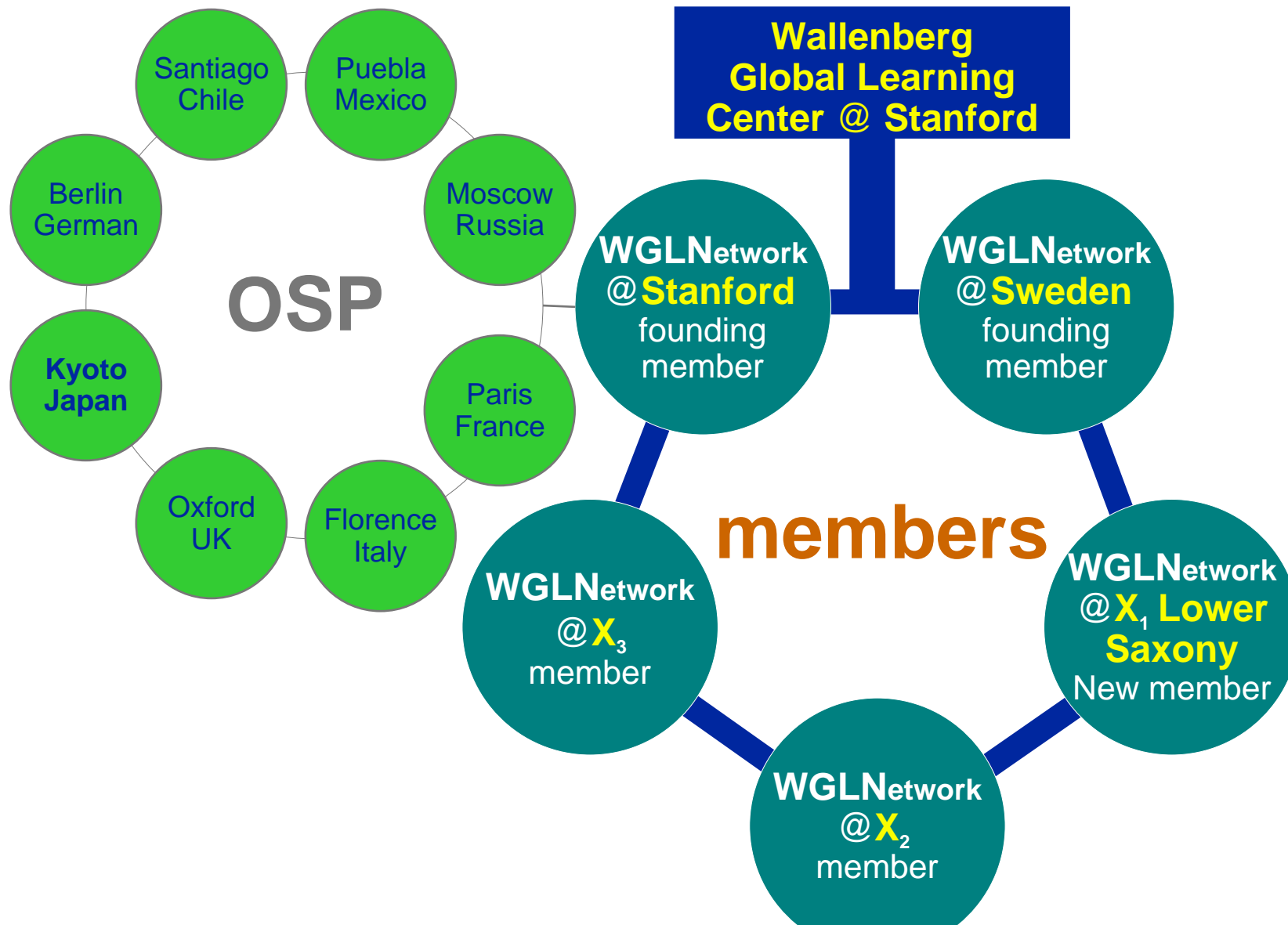


# wallenberg global learning center and network \_ affiliates





# overseas study program @ stanford



# structuring the Lab's activity\_b

## ◆ thrusts

- ◆ 5-10 year open ended commitments
- ◆ all Lab activities must be aligned with these
- ◆ **deliver** world class competency recognition for the lab

## ◆ projects

- ◆ 1-3 year start to finish commitments
- ◆ most lab activity will be driven by these
- ◆ most staff will work on 1-3 projects
- ◆ **deliver** reports, publications, tools and services

# structuring the Lab's activity\_c

## ◆ test beds

- ◆ 1-3 year start to finish commitments (renewable)
- ◆ most projects will require one or more test beds
- ◆ **deliver** compelling working models of the future

## ◆ studies

- ◆ 2 week to 5 year start to finish commitments
- ◆ most staff will see a steady turnover of these (variety)
- ◆ **deliver** reports and publications



# DESIGNING SPACES AND BUILDINGS FOR THE NEW TEACHING

**Wallenberg hall, stanford university**



# Designing a building that will provide on-going experiments in learning spaces: Wallenberg Hall

- ◆ Gateway to the University
- ◆ Unique research/ learning environments
- ◆ Showcase for principles of learning
- ◆ Technology-augmented experiences
- ◆ Center for global communities
- ◆ Completion date 2002



$$L_e = mc^2$$



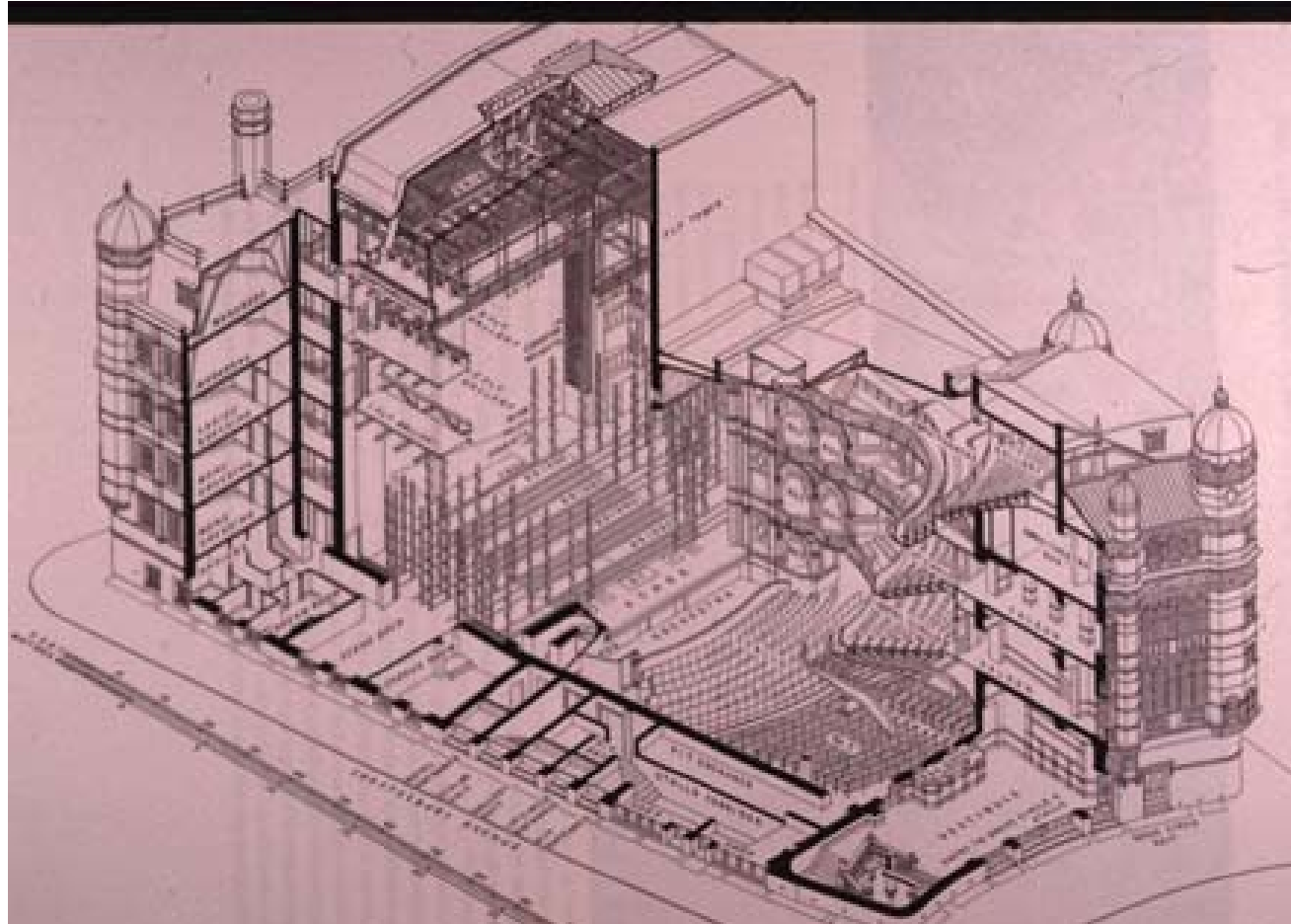
# Design Challenges

- ◆ Spaces that allow for rich interaction in **physical and virtual** digital environments.
- ◆ Spaces that promote **self-organization of learning communities** and activities, in a global as well as local sense.
- ◆ Spaces that concurrently provide for different levels of **formal and informal** interaction in public and private venues.
- ◆ Spaces that are in some manner '**transparent**' or otherwise '**viewable**.'
- ◆ Spaces that are 'smart' in the sense of **integrating technology to augment human experience**. These spaces might have '**memory**' of the people who inhabit them and the experiences that occur.



## Models from the past: the theater

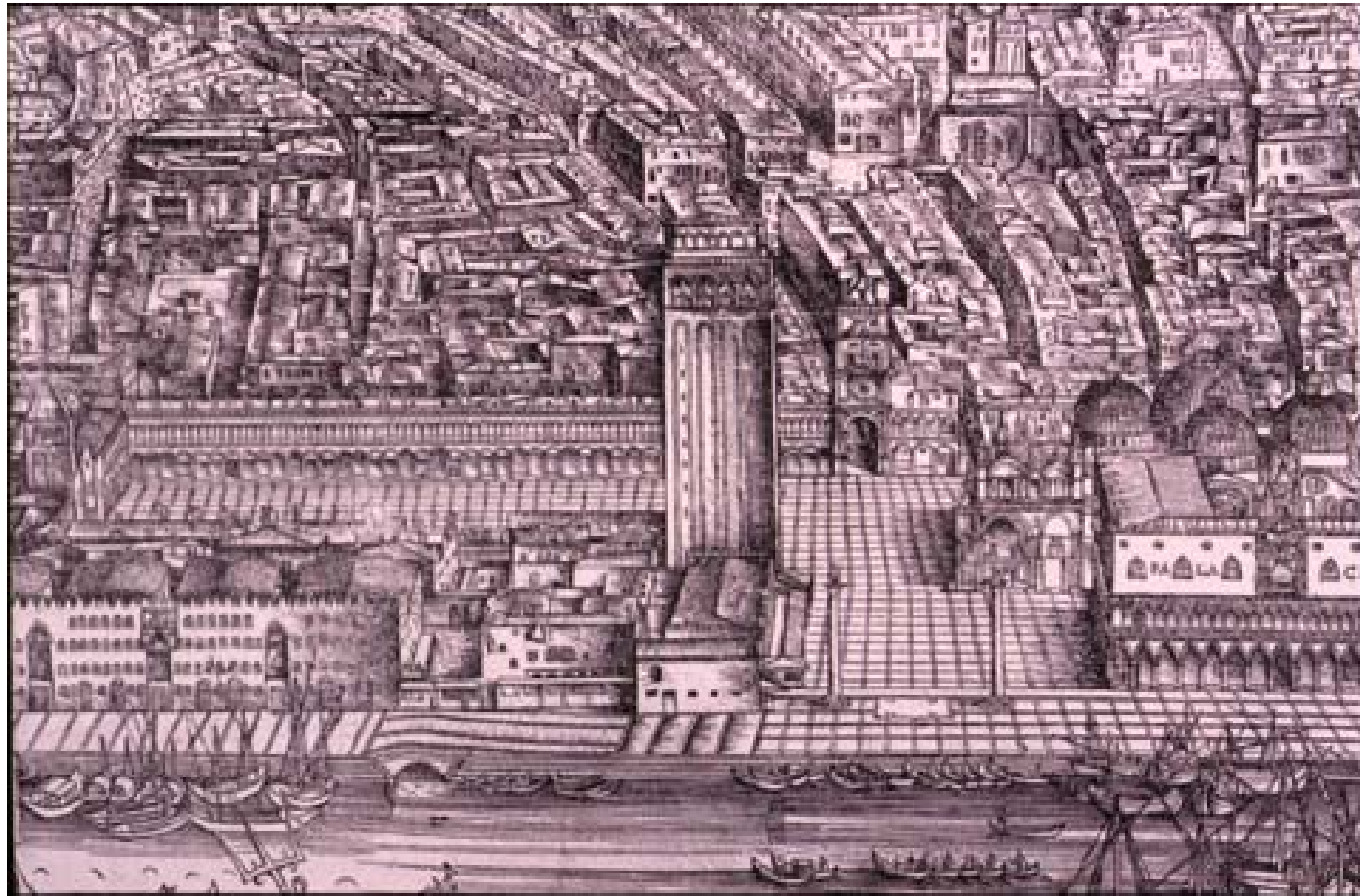
### ... A PERMANENTLY UNFINISHED BUILDING



: mc<sup>2</sup>

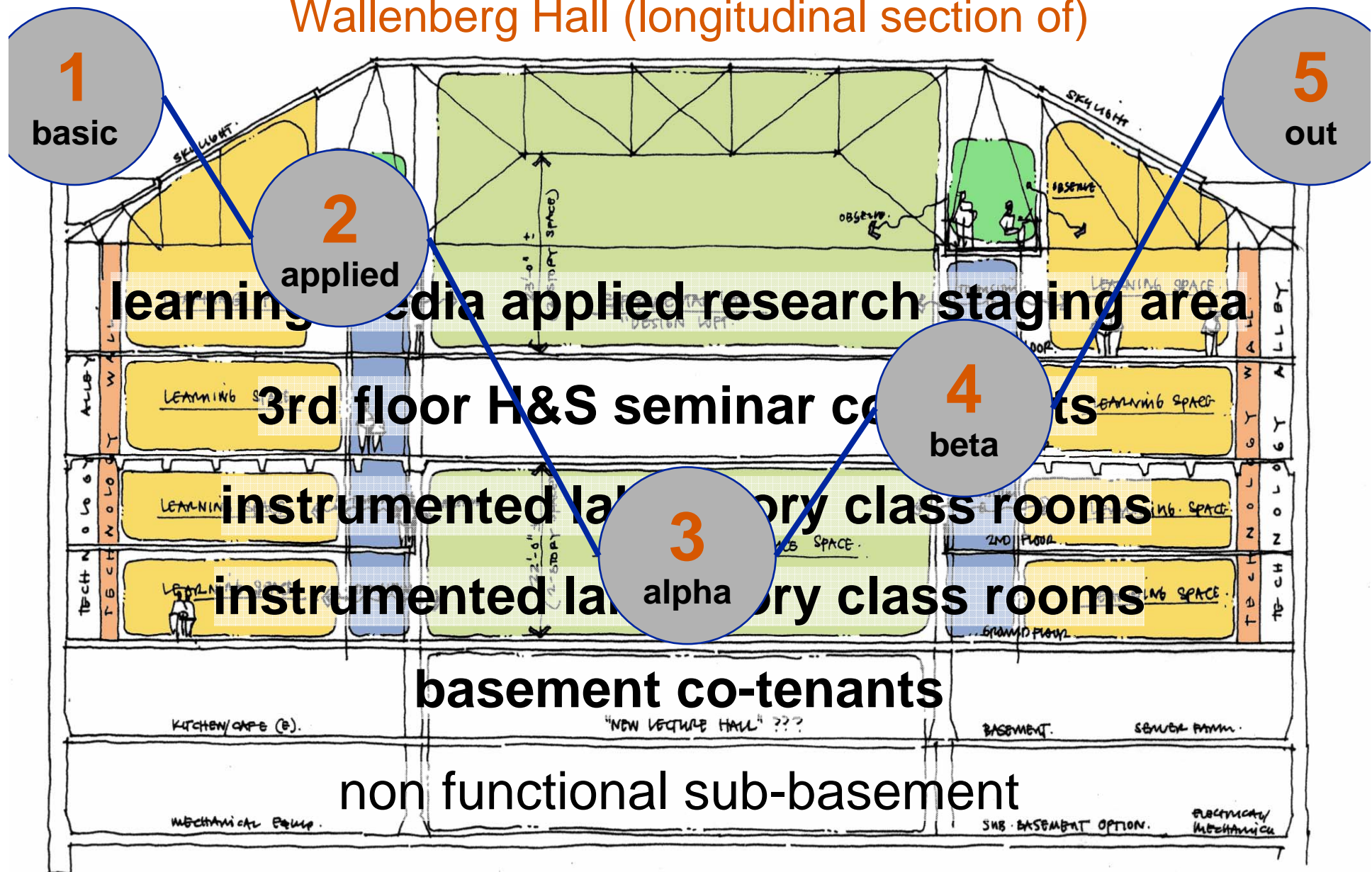
## Models from the past: the piazza

.... FLUID MIX OF PUBLIC AND PRIVATE





## Wallenberg Hall (longitudinal section of)



# flexible shared ownership



$$L_e = mc^2$$