# SWEDISH DELEGATION VISIT TO BAY AREA (1-4 OCTOBER 2019)

## CALIE PAPERS #2

CALIE Project Partners
Sweden

# CALIE Paper 2: Bay Area Visit

October 1-4, 2019, a delegation from the CALIE partner universities; Gothenburg, Lund, Stockholm, and Uppsala, visited the University of California, Berkeley and Stanford University to learn more about the role of academic leadership in facilitating institutional change.

The delegation included Deputy Vice-Chancellors, deans, vice-deans, heads of offices in charge of quality assurance, and representatives from international offices.

UC Berkeley and Stanford were selected as partner universities of the CALIE project for a number of reasons. Both institutions share a long history of social engagement and community outreach, excellence in transboundary and innovative education and research, and excellent research environments of relevance for education, such as in artificial intelligence, cognitive sciences, multi- and interdisciplinary research, and education. Of great interest is their recent experience with major strategic planning processes. They also share important features with the CALIE universities, e.g they are built on a strong foundation of faculty-driven advancement of education and research, and are mainly organized along disciplinary lines.

There are, of course, context-specific elements which should be noted. The difference with regard to funding is substantial between the Swedish and US institutions, both when it comes to level of available resources, the role of fundraising/philanthropy and the application of student fees. Education is organized differently – students in the US enrol at a university, not a particular program as in Sweden, and there is a focus on breadth rather than specialization during the first years of education.

However, universities on both sides of the Atlantic face similar challenges when it comes to how to adapt higher education and research to the rapid societal changes that are taking place. The changes place high demands on the academic leadership on all levels to advance constructive development within the university as a whole.

It is evident that these universities can learn a great deal from each other. The reflections below highlight the issues at the core of the CALIE project and the conversations taking place during the visit.

## Institutional Change and Strategic Initiatives

The overall impression from both visits is that US institutions are characterized by a strong focus on continuous development. They are prone to change and are pro-active and agile in response to new challenges.

The strategic processes of change that have taken place at UC Berkeley (strategic plan process and signature initiatives) and Stanford (long-range planning) can serve as inspirational models for how Swedish universities can work with the renewal of education and research. Both processes were broad-based and

characterized by a dynamic bottom-up – top-down interplay. Both US partners described similar approaches that engaged stakeholders from various parts of the university from the bottom-up. The leadership initiated the processes itself, and then served in a facilitating and supporting role at most stages. At other stages of the process – in relation to the more operative solution after the generation of ideas – they needed to step in and make decisions, as well as support the initiatives already underway.

The crucial role of visionary leadership and broad-based engagement at all levels was emphasized. When it comes to leadership, it was clear that for both UC Berkeley and Stanford, the recruitment of excellent and visionary staff[1] is key. At Stanford, they saw the recruitment of staff and students as their main quality assurance instrument. So-called 'cluster hires' are sometimes used in order to secure a good mix of competencies and backgrounds in a strategic area.

Key questions that were asked by the Swedish delegation in response to the conversations taking place included; how, and to what extent, this broad-based and very interdisciplinary approach can be translated to a Swedish context, and how the academic leadership can create a culture of change and facilitate and support change to the betterment of the university as a whole when such change is needed.

## Interdisciplinarity and the Broad University

Cross-disciplinary collaboration is a top priority for universities these days and the universities present at these bilateral meetings were no exception. UC Berkeley's new bottom-up driven data science division and their Data 8 course were inspiring examples of how interdisciplinary approaches allow technical subjects to not only reach students studying non-technical disciplines but that students from non-technical areas get access to and now demand such courses. By introducing the concept of computational literacy across all disciplines (a feature of the liberal arts education model), students gain a broader perspective through their coursework.

Another interesting feature of the Data 8 initiative is that students were involved as co-creators of courses and served as project managers who liaised with the department throughout the course/module development process.

At Stanford, prioritizing interdisciplinarity resulted in a new matrix structure, which consists of many joint faculty appointments and cluster hires. This structure was deemed very interesting, but it is not clear if a similar structure would work in a Swedish context.

Examples of, and conversations on, interdisciplinary initiatives, gave rise to questions about whether Swedish universities with their fixed program structure and resource system generally are less conducive to develop interdisciplinary courses. If so, how can we open up and broaden our educational programs, and use the comprehensiveness of our institutions in a better way? Besides making it easier to address global challenges, interdisciplinary courses and programs may open up opportunities for further collaboration

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[1] *The term "staff" and "faculty" are used interchangeably throughout this document to refer to academic staff.*

across disciplinary borders. At the same time, it was recognized that CALIE universities have good interdisciplinary initiatives, but in order for more to follow, existing examples should be showcased, and major barriers for collaboration and mobility across disciplinary borders need to be removed. To facilitate the inclusion of education in larger interdisciplinary research projects, education (at all three levels) should be on the agenda from the outset.

Other questions that were raised included how to recognize and support cross-departmental collaboration and what a more liberal arts-inspired educational model would look like within the Swedish context.

## Teaching and Learning at the Core

Both UC Berkeley and Stanford expressed a commitment to education and highlighted their responsibility to contribute to solving societal challenges. It was evident that a strong connection exists between research and education. For example, educational initiatives were expected to align with larger research initiatives. Moreover, all faculty are expected to teach and their teaching clearly impacts the potential for academic promotion. There is also a tradition for the best professors to teach at the undergraduate level and for undergraduate students to already be involved in research. This model emphasizes the important role of education in inspiring and equipping students with the skills necessary to solve societal challenges.

Another innovative practice is the involvement of students in the creation of curriculum. The engagement of undergraduate students in research and the co-creation of curriculum significantly improves the overall student experience and creates a more inclusive university environment.

For the Swedish universities, conversations on this topic brought about questions on how the value and status of education can be increased, and how the role of education and teaching can be further highlighted. Incentive structures with regard to recruitment and promotion were discussed, but also how the divide between research and education can be bridged by encouraging a more natural integration of education in large research initiatives, how co-creation of curriculum can be facilitated, and how Swedish universities can highlight teaching of PhD students as part of our educational mission.

## Institutional Identity and Culture

Citizenship is a concept everyone is familiar with. But Stanford's 'university citizenship' concept, which was also notable at UC Berkeley, is interesting as it focuses on an understanding of the university's mission, vision, and complexities, and how faculty and students can contribute to the continued development of the university as a whole. This message pervades the university and is communicated to staff in leadership courses, and to students throughout their education. At UC Berkeley, they have an introductory undergraduate course, Berkeley Connect, for all students.

When students are active citizens of their universities, they will engage in all aspects of their learning and contribute to the betterment of the university as a whole. But active citizenship on the part of the staff will also contribute to a happier working environment and the willingness to contribute to university-wide work; like engaging in interdisciplinary work despite existing barriers and contributing to university-wide work such as the strategic plan (UC Berkeley) and long-range planning (Stanford). It also emphasizes that a school or discipline becomes stronger for being part of the university as a whole.

Parallel to, and part of, the topic of university citizenship was the notion that having visionary leaders at all levels of the university is critical to the success of the institution. Several examples of more corporate-like leadership development programs were presented. A common struggle was finding the best way to train leaders as well as developing a vision that they can implement.

A key difference between the US and Swedish contexts is that students pay for their education in the US. Still, the concept of university citizenship and the focus on the greater university was very inspirational to the Swedish delegation. How do we in a Swedish context develop a sense of 'university citizenship' in all students and staff? How do we create a culture where students and staff are happy to engage in the university's overall development? Through continued dialogue and an openness to change, we may soon have answers to these questions.

# APPENDIX A: Notes from the CALIE Bay Area Visit

On October 1-4, 2019, Lund University, University of Gothenburg, Stockholm University and Uppsala University, visited the University of California, Berkeley and Stanford University within the framework of the CALIE project. The project aims at strengthening the capacity for universities to respond to future challenges by developing tools on a strategic level in regard to the renewal of education and academic leadership.

Key questions for the conversations held during the meetings and presentations included:

- Which structural characteristics at a university support/inhibit change?
- Which structural characteristics support/inhibit collective leadership and accountability?
- Respecting academic freedom, how is a common understanding of strategic choices anchored?
- What is the role and mandate of academic leaders to drive development and how is it supported? How does the academic leadership at all levels facilitate and support processes of change?
- Which structural characteristics support/inhibit interdisciplinary education and research, especially at broad comprehensive universities?
- How can broad research universities best make use of their comprehensiveness in responding to societal challenges and supporting sustainable development? How do we play to our greatest strengths?
- In order to meet societal challenges, what mechanisms strengthen the connection between education and research? What enables research-based or research-integrated education?
- What is the role of universities in a rapidly changing world and how do we educate the citizens of the future?
- How does the university influence change in society (e.g., through the development of a new product, influencing policy, etc.)? How do we translate campus-ideas into societal impact?

# University of California at Berkeley (UCB) Visit (October 2, 2019)

## Breakfast and Welcome
*Participants*: **Ashley Spinelli**, *Senior Global Engagement Specialist;* **Alice Tsai,** *Global Engagement Specialist;* **Inderjit Takhar,** *Global Engagement Assistant,* **Linda Rugg,** *Associate Vice Chancellor for Research*

## Sweden- USA CALIE project – Meet and Greet
*Participants*: **Paul Alivisatos,** *Executive Vice Chancellor and Provost;* **Lisa Alvarez – Cohen,** *Vice Provost for Academic Planning, Senior International Officer;* **Linda Rugg,** *Associate Vice Chancellor for Research*

A conversation between the university leadership of UCB and the four Swedish Deputy Vice-Chancellors revealed that the questions facing university leadership of both countries are not always so different, despite the distinct higher education and national contexts in which they work.

The important role of public universities was brought up, as access to education is one of the primary ways to achieve income advancement and social mobility.

UCB Executive Vice Chancellor and Provost Paul Alivisatos described several new bottom-up initiatives as well as the launch of an initiative surrounding the area of data science. The initiative started with an undergraduate course and quickly drew interest from students and staff from all corners of the campus. He went on to explain the process to develop a clear sense of the campus' current and future opportunities, the strategic planning process taking place in 2018, initiated by Chancellor Carol Christ.

### The Strategic Planning Process
The UCB leadership does not try to control the innovation processes on campus but rather tries to understand, facilitate and support it through various tools, such as their strategic plan. During this process, UCB developed four priority areas through campus-wide participation: signature initiatives, diversity, finance reform, and student experience and enrolment. The aim was to bring together faculty, deans, administrative staff, students, administrators, alumni, and other stakeholders into working groups to think about the different priority areas and how to improve them.

The output of this process was a two-page document which, over 10-years, was to be implemented. While they did not expect to achieve everything outlined in the plan, it would be considered a success if even one-third was implemented. In short, the question to answer was "how do we pave the way so that this can move forward?"

Observations and outcomes of the process:
- the process was deemed valuable in and of itself, bringing together different departments and parts of the university
- not everyone was on board, nor did all working groups behave in the ways the leadership expected

- there was an advantage of having a short working timeline (1 year) as well as trying to keep things as simple as possible so as to increase the success of the implementation phase
- it was positive to have joint faculty/ administrative staff working groups
- the result of this process was a culture shift and the development of Signature initiatives

Paul Alivisatos expressed interest in the overarching CALIE question of institutional change – when it makes sense, when to initiate it, and how to drive and support it. He supported the idea of identifying a number of topics of mutual interest for continued collaboration.

## UC Berkeley Signature Initiatives meeting *(website)*
*Participants:* **Lisa Alvarez – Cohen,** *Vice Provost for Academic Planning, Senior International Officer;* **Randy Katz,** *Vice Chancellor for Research;* **Linda Rugg,** *Associate Vice Chancellor for Research*

The process of establishing the Signature Initiatives included several steps:

1. Determining criteria for Signature Initiatives:
   a. What is of interest?
   b. What topics are affiliated with more than one dean?
   c. What needs campus-wide attention in terms of both research and education?
2. Assembling groups of relevant stakeholders (e.g., faculty/administrative staff, students, alumni) to identify themes – an iterative process.
3. Creating a shortlist of 5(+1) of thematic areas that were deemed as 'societal challenges for the 21$^{st}$ century', each with three sub-themes.
   a. Charting a New Course to Health and Wellbeing
   b. The Future of Democracy
   c. Environmental Change, Sustainability, and Justice
   d. Equality, Equity, and Opportunity
   e. Inclusive Intelligence: Artificial Intelligence in the Service of Science, Work, and the Public Good
   f. Lighting the Way to the Public Research University of the Future
4. Nominating individuals to join the working group. Each person had to write an essay for consideration. There were 15 individuals in each group.
5. Collecting verbal and written comments, for instance through town hall meetings. All comments were transcribed and considered by working groups.
6. Submitting reports and named resources (human and non-human) to each area/sub-area. Reports were written by the working groups.
7. Reviewing (and approving relevant) recommendations outlined in working group reports. This process belonged to the Academic Senate.

The ideal outcome(s)/impact:
- Obtain enough resources to add 100 new faculty with interdisciplinary expertise

- - Achieved through formulating cluster-hires: 5 new faculty at a time. Look for people who are interested—specialized people with generalist interests.
- Endorsement from Academic Senate and deans to ensure long-term commitment.
- Identify what new facilities and fellowships are needed. For example, UCB does not have a medical school. Therefore, what strategic partnership is needed to achieve our goals?
- Bring disciplines together to create flexible institutes/centres that have an annual focus on a topic rather than formal schools that focus on one topic 'indefinitely'. Search for agile structures.

Reflections about the Signature Initiatives Process
- The process resulted in greater academic buy-in as it was a partnership plan and not a top-down administration plan.
- The role of the leadership was to initiate the strategic plan process, facilitate it, harmonize the fundraising process, and make decisions when necessary. Some light-handed direction throughout the working group process was useful.
- It was not a linear process (e.g., disciplinary differences in terms of engagement level, variation in the success rate of groups, etc.).
- Fundamental research at the core of the process and all decisions, but is it now also viewed through a societal lens.
- Community engagement: townhall events were open to the public but mostly attended by university employees and students.

Data Science (*website*) and Inclusive Intelligence (*website*)
*Participants:* **Bob Jacobsen,** *Interim Dean, Division of Data Science;* **Linda Rugg,** *Associate Vice Chancellor for Research;* **Keeley Takimoto,** *Modules Program Coordinator, Data Science Education Programs;* **Anthony Suen**, *Director of Programs, Data Science Education Programs;* **Margo Boenig-Liptsin**, *Human Contexts and Ethics Coordinator, Data Science Education Programs (and Lecturer, History Department);* **Fernando Perez**, *Assistant professor statistics, Faculty Scientist, Department of Data Science & Technology LBNL, Berkeley Institute for Data Science (BIDS) Senior Fellow*

The new Division of Data Science and Information is originally a bottom-up initiative, created in response to the growing importance and demand for knowledge in data and IT in a rapidly changing and digital world. There is a great deal of support and demand from students regarding data science. Student demand and engaged faculty are what made the initiative move forward. An Associate Provost, Jennifer Tour Chayes, was recently hired to lead the Division.

Ideas and Course Development
The key questions they ask themselves: How do we make these courses relevant and accessible to all students (especially those with no background in this area)? How do we make this content interact with our current work?

The courses offered have been created by interdisciplinary teams. Courses can be data science courses into which social science or ethics perspectives are integrated, or it can be courses in other subject matters into which data science is integrated.

To encourage staff to get involved, the Division offered an annual pedagogy summer course to teach faculty about what Data 8 is and how they could incorporate it into their curriculum. The faculties receive support in their course development on how they incorporate data science into a course, everything from one lesson to an entire course. Faculty and students participate in course development. Courses are created from scratch, they do not simply re-package existing courses.

One example of a course, the Data 8 course, is designed for entry-level students from any major. It is designed specifically for students who have not previously taken statistics or computer science courses.

Success Factors for the Chosen Approach *(answer to the question about how to address the resistance to integrating data science into the existing curriculum)*
- Motto: supplement, complement and support existing curricula (data-science lens to look at what is currently being taught)
- Offer support (digital support, advice, best practice, pedagogy workshop) – enabling rather than enforcing
- Undergraduate student demand and enthusiasm for this type of offering
- Bring a new lens to an existing topic
- Partnership approach
- Word of mouth
- Tailormade courses adapted to the needs of the subject area
- Student engagement: students work as developers either on a volunteer basis or for credit. Students also teach courses.
- Jupiter Hub open-source software (possibilities for integration with Canvas)

Lunch – discussion on Sweden- USA CALIE project

*Linda Rugg, Associate Vice Chancellor for Research & Professor, Scandinavian Studies;* **Diana Wu**, *Dean, UC Extension;* **Anthony Cascardi**, *Dean, Arts & Humanities (TBC);* **Trond Petersen**, *Executive Associate Dean, International Programs, College of Letters & Science;* **Mio Katayama-Owens**, *Assistant Dean, International, College of Natural Resources;* **Anthony St. George**, *Assistant Dean, International, College of Engineering;* **Sudha Shetty**, *Assistant Dean, Global Alliances, Goldman School of Public Policy;* **Cindy Bumgarner**, *Chief of Staff, Vice Chancellor for Undergraduate Education;* **Jeroen Dewulf**, *Interim Director, Institute of International Studies & Director, Institute of European Studies;* **Robert Strand**, *Director, Center for Responsible Business, Haas School of Business;* **Karin Sanders**, *Chair, Department of Scandinavian Studies*

This roundtable discussion focused a lot on the differences and similarities between the two higher education landscapes; including:

## Focus Areas

The CALIE partners have identified similar areas of focus as UCB's Signature Initiatives.

## Academic Promotion

Academic promotion at UCB is difficult (almost impossible) without being regarded as a good teacher. One is not rewarded for being a good teacher but is, in a way, penalized for being a bad one. If your teaching skills are deemed insufficient, there is support to help you improve. Peer observations of teaching are common protocol.

Career academics are evaluated at 2- to 5-year increments with a salary increase of $1,000 to $20,000. In order to receive a high salary increase, one must be good at research, teaching, and administration.

## Student Engagement

At UCB, student engagement during their educational experience is noteworthy – the sense of pride of being part of the community. Swedish students focus on the program vs. the institution. Their pride comes from being a member of a certain disciplinary community. At UCB, student loyalty extends even after graduation. Each year, the annual event 'Homecoming' is just that—an event to welcome home alumni to their former home. Previous discussions alluded that this might be due to the fact that universities need alumni donations whereas Swedish universities get their funds from taxes.

## Other

There is a higher level of trust in Swedish higher education institutions.

## Environment/Sustainability meeting

*Participants:* **Mark Stacey,** *Department Chair, Civil and Environmental Engineering;* **Linda Rugg,** *Associate Vice Chancellor for Research;* **Tiff Dressen,** *Strategic Initiatives, Vice Chancellor for Research Office*

Mark Stacey is co-chair of the working group on Environmental Change, Sustainability, and Justice.

The goal of the Signature Initiatives working groups was to break out of discipline/organizational silos to identify specific examples to name as Signature Initiatives and sub-themes. Their task was to organize different ideas into clusters, then into three actionable sub-themes. The bottom-up process included many opportunities for feedback from various stakeholders at different stages of the process.

## The Role of University Leadership

The role of the university leadership in the process has been a facilitating one, providing the structure and pre-conditions for the working groups. Their role in the implementation phase is to make the work actionable. Deans need to be activated and take the ideas, form coalitions and go after funding.

Engaging Faculty in Cross-Disciplinary Work
- Many faculty are motivated to solve 'big problems' and to contribute to the university. The leadership must eliminate barriers so that those who are naturally inclined will engage. This includes providing rewards for participation in the process, etc.
- In the particular case of Signature Initiative working groups, the fact that they were launched in conjunction with a major fundraising campaign contributed to getting people involved
- Create opportunities for co-teaching
- Find motivated faculty (often has more to do with personality than discipline, younger more prone to engage)
- Move towards acceptance of interdisciplinary collaborations

Interdisciplinarity
- Faculty want to stay narrow (in their field). UCB observed that it is often easier to collaborate across disciplines with faculty from other (international) universities than with academic peers within UCB. Nevertheless, there are still many examples and further opportunities for co-teaching within the university.
- At UCB, the merit system begins at the department level so when peers are up for tenure, colleagues may not be confident in their ability to evaluate faculty across disciplinary boundaries.
- In Sweden, cross-disciplinary work is not always rewarded in obvious ways. The system is structured in a way that is highly dependent on disciplinary expertise.
- All agreed that you need to be well established in your own field before you work on interdisciplinary things.

Student Engagement
- Student engagement is a priority at UCB; including the co-creation of content.
- There is an assumption that initiatives that begin with research will eventually bleed into teaching, but one must think about both outcomes from the beginning of the process.
- Scientific teams are expected to have undergraduate students in their teams (part of joint mission education-research)

Arts & Humanities *([website](website))*/ Dept. of Scandinavian meeting *([website](website))*
*Participants:* **Anthony Cascardi,** *Dean, Arts and Humanities;* **Karin Sanders,** *Department Chair, Department of Scandinavian;* **Linda Rugg,** *Associate Vice Chancellor for Research*

Although the enrollment numbers are up in the arts and remain the same in the humanities, Deans are still concerned that those who begin their studies here are thinking their major is training for their first job. Students (and others) believe 'soft skills' are not important, but they are. In fact, they are necessary skills, especially for entrepreneurs. In order to serve the broader university community, new courses have been designed to give undergraduate students an introduction to very broad topics by viewing them through a discipline-specific lens. These courses are taken by more students who major in a subject offered outside of the college than from within.

Measures to Enhance Enrollment
- Program in digital humanities
- Course in entrepreneurship
- New broad courses *(see description above)*

The liberal education requirements (2 years, lower-division courses) help students figure out what they want to study and are a reason many more students from outside the college take these courses.

There is also a larger trend at UCB to employ an activity-based learning model (to steer away from the traditional senior project). The aim is for students to create the structure as well as the content.

UCB humanities majors take many diverse pathways in their careers which is seen as an advantage. Sweden has data on career outcomes since 1993.

### Lifelong Learning meeting *([website](website))*
*Participants: **Diana Wu,** Dean, UC Extension; **Ramu Nagappan,** Director, Humanities, Education and Fall Programs*

UC Extension was founded in the late 1800s with the purpose of offering lectures to the public. Today, workforce development is a critical component of their mission, which ultimately aims to provide greater access to higher education to those who cannot enrol in full-time degree programs. The mission and scope of activities have grown.

This unit does not receive funds from the state or the university; UC Extension, therefore, relies heavily on student fees. Any budget surplus is transferred to UCB main campus.

Education & Instruction
Courses vary in length from one day to a whole semester. Courses are mainly offered for academic credit and aim to match employer needs (of employee skills) with UCB's strengths. Today, about half of all UC Extension students take courses online.

UC Extension hires its own instructors, some who come from industry and others who are professional teachers.

UC Extension has to define what is unique and justify why students should come to UCB and pay for a course that they can take online for free elsewhere.

Student fees
Generally, students pay for their courses either through employer-subsidies (employers who consider these courses as professional development) or from their personal funds.

Educational model
Courses are either taught online or in-person and course offerings reflect student demand.

There is a limit to the number of credits a student can transfer in and apply towards their UCB (main campus) degree. This includes UC Extension credits.


## Center for Responsible Business meeting *(website)*

*Participants*: **Robert Strand,** *Executive Director, Center for Responsible Business*

In the US, there is the mentality that resources are scarce, and competition for these resources has created an unhealthy climate in the US.

UCB knows it cannot solve 'wicked problems', but that it can help tame them. How? Through consensus-building, data, etc.

Through work with the Peder Sather Center, Norwegian universities collaborate with UCB. This network is an important platform.

UCB has a vision for a 'Nordic platform', where UCB can study 'The Nordics' and signature themes like sustainable development, human rights, equality, and democracy. The platform would relate to UCB's Signature Initiatives and encompass both education, research and collaboration.

Why 'The Nordics'? Because:
- The Nordic Council of Ministers is the world's oldest regional partnership
- If 'The Nordics' were one country, it's population would be approximately 27 million people
- The economy of 'The Nordics' is bigger than Russia's (11th largest)
- The Nordic model of capitalism took them from the poorest to the wealthiest countries in just 5 generations
- 'The Nordics' rank at the top of every major world ranking (e.g., Democracy Index, SDG, Gender-Equality Index, etc.)

## Middag hos Sveriges generalkonsul i SF, Barbro Osher

# Stanford University Visit (October 3, 2019)

## Breakfast and Welcome

*Participants*: **John Hennessy**, *Former President Stanford University, currently Director of the Knight-Hennessy Scholars Program. John led the formation of the four big interdisciplinary initiatives (2003-6).*

John Hennessy described the major interdisciplinary initiatives initiated between 2003 and 2006. They were initiated to address the big societal challenges and aimed at educating the leaders of the future. They were a long-term engagement: "It takes 10 years to get something going in the academy, 20 years for it to reach its peak".

Many of Stanford's initiatives, such as Bio-X, relies on a matrix model organization that began as a process for the joint appointment of faculty. Administrative obstacles were solved because disciplinary opportunities were huge and compelling.

Lessons from these Initiatives
- Pick good faculty and students and have a core group dedicated to the initiative
- Give working groups a lot of freedom
- Research leads and education follows – initiatives have influenced education for instance by the development of cross-disciplinary courses, many have Ph.D. students, graduate programs, etc., not always at the undergraduate level
- Still important to safeguard disciplines and departments (avoid cloning problem)
- Important to safeguard quality, also in a matrix organisation

Quality Assurance
The quality of interdisciplinary work is evaluated differently than other work. Adhoc disciplinary committees essentially want to evaluate what happens when you put A and B together and develop C. The positive result of this process has created a situation where joint appointments across the university are now commonplace. As a result of successful interdisciplinary work, there are new courses and degrees across the campus.

The quality of interdisciplinary work is in the added-value.

Academic Promotion and Incentives for Interdisciplinary Work
To solve the problem for junior faculty who had a joint appointment, a new policy allowed them to choose which department they wanted to join at the time of tenure. The other department can choose to contribute and create a joint-tenure appointment or offer no tenure opportunity.

## Challenges Related to Interdisciplinary Work
- The vision for education often extends past the university walls, but not so much in research.
- Finding faculty leaders as most faculty don't have time to develop their leadership skills
- Universities are too risk-averse
- Harmonizing the message is difficult (fundraising drive helped to clarify the message)

The role of universities today is to stick to core values, provide evidence, talk facts.


## Introduction to Stanford, with special emphasis on CALIE themes
*Participants:* **Arthur Bienenstock**, *Professor of Photon Science, Emeritus Vice Provost and Dean of Research* *(bio); **Francisco Ramirez,** Professor of Education and, by courtesy, of Sociology (bio)*

### Francisco Ramirez
American universities are more socially embedded than many others. The American Cultural Matrix is optimistic, liberal, individualistic, and competition is at the core of universities.

#### Visible Changes at US Universities
- more entrepreneurial
- more accessible
- more empowered individuals
- more professionalized

There is a lot to learn from the US context. While all practices are portable, they must also be translated into the local context to be successful.

US universities also focus a lot on diversity and inclusion. Various organizations (outside of the university) have a special focus on these issues. As such, Stanford's major challenge is: how can we be non-discriminatory while still being exclusive?

### Arthur Bienenstock
Arthur gave a broad account of Stanford's history based on his own long career at the institution.
- 1970-1980: Introduction of teacher assessment into appointment and promotion, the introduction of freshman seminars, hard money support for tenure-line faculty, build-up of strong research capability.
- 1980-2000: Renewed emphasis on undergraduate education – meet outstanding professors as first and second-year students.
- 2000-2016 Big push for interdisciplinary research and education, the establishment of priority areas with faculty input.

#### Stanford Success Factors
- Absence of barriers between schools and departments
- Generous alumni and benefactors

- Outstanding research and education environment
- Visionary leadership (presidents, provosts, trustees, faculty)
- Its culture and the fact that half of the faculty live on campus
- Special physical environment—both in terms of nature/landscape, but also in terms of its proximity to national labs, Silicon Valley, UC-Berkeley, etc.

Interdisciplinary Initiatives – Why Did They Work?

- Groundwork from faculty before choosing initiatives – a pre-condition for a top-down initiative to work. Need an anchoring process and to find some key faculty.
- No formal process to anchor decisions, but always a process behind it to secure support.
- The provost gives money to most schools/colleges and also has the mandate to drive change.

Education – Teaching

- Teaching is part of every faculty member's position, but the teaching load is light
- The best people teach first- and second-year students
- Recruitment of junior faculty is key

## The Stanford Leadership Academy and Innovation *([website](website))*
*Participants:* **Robert L Joss AC,** *Dean Emeritus, Graduate School of Business*

Stanford created the Stanford Leadership Academy and other leadership development programs for its employees because "Leadership at all levels is key. Large organizations need leaders at all levels". The Leadership Academy has been running for 11 years and is managed by the business school. It is influenced by executive education programs and its main focus is on identity and what constitutes good leadership at Stanford.

Academy Nomination Process
Schools and departments nominate an individual to participate. Ultimately, the President and Provost decide who will join the cohort (20-25 people annually). Each cohort is a mixture of faculty and administrators at various points in their careers. The trend so far has been that there is more diversity in disciplines, but not as much in terms of point in one's career.

Program Objectives

- Enhance leadership capacity
- Expand knowledge of university and its current and future challenges
- Broaden appreciation for Stanford's culture and history
- Foster a sense of community by strengthening relationships across units
- Participate actively in a culture of development

Academy Program Structure

The 8-month program includes a 360 assessment to bring about self-awareness. Then, as a result of the 360 assessment, participants will choose a development focus. This is something they personally want to improve—develop a skill, achieve a goal, etc.

Simultaneously, individuals identify a 'leadership challenge' which they developed with a sponsor. The idea is to choose something they can work on throughout the 8 months which impacts their work-life in some way.

There are also in-person workshops, as well as "in-between meetings" (e.g., supplemental readings, pre-workshop readings, etc.), in addition to executive coaching sessions 6-times a year on themes such as culture & values, communication, influence, leading teams, diversity, developing others.

Other Leadership Opportunities
Staff-oriented opportunities include Leadership at Stanford (12-day program), Stanford Manager Academy (30 people per quarter participate in two 2-day workshops), and Stanford Fellows program (for 10 faculty or senior staff). There are also leadership courses available for lower-level administrative staff.

Participation in these programs requires a nomination from senior staff and/or deans.

University Citizenship
During this session, there was also a discussion around the concept of university citizenship, i.e. that a person understands the university's mission, vision, and complexities, and contributes to its continued development through research, education, and being a good citizen. This notion is strong at Stanford and makes it easier to convince staff to take on leadership roles – they see it as being part of something great, and taking responsibility for the institution as a whole.


**Lunch with Wallenberg post-docs**
*Participants*: **Martin Almquist** ([bio](#)); **Lene Kristian Bryngemark** ([bio](#)); **Tobias Dalberg** ([bio](#)); **Géraldine Fauville** ([bio](#))

Four Wallenberg post-docs joined the CALIE delegation to share their thoughts and observations regarding their academic experience in Sweden and at Stanford. Their comments are as follows:

Educational Environment
The pace of work was generally described as much faster at Stanford. This can differ based on individual or departmental culture, but the general comment about the pace of work holds true in most cases.

### Education & Training

- New teachers receive lots of support. For example, teaching assistants (often masters and doctoral students) are required to take a preparatory course before they begin in their new role.
- Regarding the post-doc experience itself, one individual experienced greater responsibility in directing research.
- The main focus seems to be on research more than anything else.
- The student experience is taken very seriously.
- The integration of undergraduate and master's students, together with PhDs and post-docs in research labs was a surprise but seems interesting and very useful.

### Cultural Differences

There seems to be a culture of training which seeks to communicate 'the rules of the game' to all. Additionally, there is a general attitude at Stanford that 'nothing is impossible', whereas in Sweden you wouldn't necessarily start something you can't finish. At Stanford, it is often encouraged to start something and 'see where it goes'.

### Miscellaneous

All post-docs were extremely grateful for their Wallenberg scholarships as they expressed that due to the high local cost of living the stipend offered by the Swedish Research Council (VR) would not be sufficient.

## Stanford's Long-range Planning *(website)*
*Participants*: **Persis Drell**, *Provost, Stanford University*

At Stanford, the Provost is the chief academic officer or the 'dean of deans'. The Provost's single most important relationship is with the President of the university. They must have an aligned vision, but there is an advantage in having different styles and approaches.

### Institutional Change

Institutional change is very hard. It is easier to make a change when things are really bad than when they are good because there's only one way to go: up. But the best time to make changes is when the university is strong. A complex but important balance to strike.

University citizenship is very important. Research, education, and collaboration must be seen as a whole, not only research.

### University Organization & Funding

Something unique to Stanford is that the Provost is also responsible for the university's budget. As such, the money generated by tuition doesn't go to an individual school but back to the university as a whole. Then it is redistributed as needed. This is also known as *responsibility-centred management*. "The school of engineering is great partly because they are a neighbour to a great school of humanities".

This means the Provost can move money around to 'incentivize' the behaviour the university wants. It can be used, for example, to encourage interdisciplinary collaboration. It also means that when a student is admitted and then wants to change their major, the money travels with them.

Research funds, however, go directly to the individual researchers/departments (minus overhead, which returns to the general funds).

Philanthropic donations are coordinated centrally and at the school level.

## Long-range Planning
- Ongoing for 2 years
- Broad process to include the whole community, parallel fundraising campaign
- Call for proposals generated 2000 proposals
- One-time only pilot funds were allocated to several initiatives to help them get organized and demonstrate proof that the university was committed to the initiatives.
- Area steering groups established in 4 different areas
- Initiatives turned into design teams and then pilots
- Themes that came out: accelerating impact, human health, diversification, etc.

## Interdisciplinarity at Stanford
Approximately 25% of engineering graduate students do a Ph.D. with a primary advisor outside the one they were admitted to (and half of them are not in the school of engineering). "Graduate students are the interdisciplinary glue". This means that Stanford now has a generation of mid-career faculty who were trained in interdisciplinary environments.

It should also be noted that there are courses that are cross-listed across academic units, e.g. a course 'Education and Society' is listed as both an education and sociology course. A lot of the cross-listings are facilitated by the fact that many professors have either joint appointments or courtesy ones. Several professors in the Graduate School of Education have courtesy appointments in sociology, history, and psychology, and most recently a joint appointment with the School of Medicine.

## Presentation of CALIE to the Stanford core CALIE team
*Participants*: **Arthur Bienenstock**, *Professor of Photon Science, Emeritus Vice Provost and Dean of Research;* **Francisco Ramirez,** *Professor of Education and, by courtesy, of Sociology*

We can agree that there are similar problems in the US and Sweden; but is it meaningful to compare best practices due to our different contexts?

| Perceived Similarities | Perceived Differences |
|---|---|
| • All partners demonstrate a commitment to combining visionary leadership<br>• Community buy-in is necessary | • Stanford's operating budget is several times larger than that of the CALIE partners' individual operating budgets |

| | |
|---|---|
| • Cross-disciplinarily is a challenge<br>• Our most important 'product' are our students | • Stanford aims to please parents, students, and donors, while Swedish higher education institutions aim to please taxpayers and politicians |

A question of resources or culture?
The operating budget of Stanford and those of Swedish universities is unparalleled. If Swedish universities had more money, would it solve our problems?

Stanford's excellence is embedded in their culture. Stanford always wants to be better, despite being ranked #3 in the world. They also send the message that "if you have a good idea, we'll find you the resources".

Within the Swedish context, there are opportunities to work on the internal academic culture. It may be that this is a culture issue, not a cost issue.

Human Resources
Stanford has a strategic focus on a matrix-model for hiring, where faculty are hired for joint appointments within traditional, disciplinary departments and interdisciplinary units.

Financial Resources
While there is a difference in how Stanford and Swedish universities receive and allocate funds, there is still some degree of flexibility in how Swedish universities allocate/redistribute funds and making strategic decisions about research. Changes within education appear to be much harder (e.g., Bologna Process, etc.).

New money, however, always creates enthusiasm for new initiatives.

Stanford Graduate School of Education *(website)*
*Participants:* **Dan Schwartz,** *Dean of Graduate School of Education*

Strategic Recruitment – Hiring Personnel
Governance is shared between the Dean (who funds positions) and faculty (who approve the position). It is the Dean's job to gather support for a faculty hire.

To begin, the Dean must first ask, "in what areas do we want to grow"? The answer to this question informs the hiring process. The faculty of the School brought a list to the Dean, who then chose a sub-set of areas to focus on. The aim was to consider things programmatically vs simply as a single hire. It was important for new hires to be able to adapt to new research areas that are globally needed.

Of the two examples shared—one having had a more positive outcome than the other—it was clear that the emergence of a natural leader during the process and opportunities for teams to connect outside of the formal working group meetings were two important factors for the success of the process.

Hiring the Right People
Best practices suggest that faculty should be hired based on:

- Assistant professors – their potential
- Tenure track hires – a prediction about whether they will be best in their field, as well as their proven track record
- Full professors – their proven track record

Tenure-track hires and interdisciplinarity: these individuals must be the best in both areas. Don't focus on journal counts. Look at the quality of their work.

Evaluations and half-reviews should be rigorous. At Stanford 8-10 external reviewers are involved in a tenure-track process.

Keeping the Right People in the Right Jobs
The tenure process is extremely competitive. But once someone achieves tenure-status, how do they remain relevant and maximize their contributions to the university? Moving tenured faculty to other schools is one option.

For non-tenure faculty, providing career coaching to help them identify the best role for them—at Stanford or elsewhere-is important. At Stanford, about half of those who don't get tenure is because of a less than ideal teaching portfolio/teaching skills.

Iowa has a point system for setting salary and promotion. Stanford has a different system where productivity is taken into account, but not by a formula. The form for promotion requires a section where you describe your contributions (what you've done) in lay terms. One question in annual evaluations is "What are you most proud of?"

## Accelerating Applications: Social X-Change (*website*)
*Participants*: **Jeremy Weinstein**, *Co-Chair, Social Problem-Solving Design Team*

The main message of this presentation was that the research and development (R&D) system is broken.
1. No one invests in R&D to tackle social problems (the US Department of Labor has an annual R&D budget of $4M, which is the same as Stanford's 'sandwich' budget).
2. The production of scientific knowledge is fundamentally divorced from *the use of* scientific knowledge.
3. Institutions responsible for tackling social problems, like government, are not learning institutions

Those working in this group do define themselves by their discipline but rather by the problems they are trying to solve. This platform enables teams to work with the public sector in tackling social problems. The process involves stakeholder participation and co-creation from the start and implies a new pathway from discovery to impact where not only publications count.

Driving this initiative requires the appropriate infrastructure (e.g., funding, physical spaces, etc.) as well as innovations in education and training, and a culture of public impact. For optimal success, this type of initiative requires people who are already established in their academic discipline and will not be (professionally) penalized for dipping into the interdisciplinary arena.

### Stanford Bio-X (*website*)
*Participants: **Carla Shatz,** David Starr Jordan Director of Stanford Bio-X; **Heideh Fattaey,** Executive Director of Operations and Programs*

The Bio-X history, vision, and organization were presented to the group. Bio-X is one of the large interdisciplinary centres initiated at Stanford 2003-2006 onwards.

The Mission of Bio-X is to catalyze discovery, education, and innovation by crossing the boundaries between disciplines, to bring interdisciplinary solutions and to create new knowledge of biological systems, for benefit of human health.

Opportunities for research include:
- Seed grant funding
- Ph.D. Fellowships open to Stanford graduate students
- The biannual Interdisciplinary Initiatives Seed Grant Program for collaborations among affiliated faculty
- The Undergraduate Summer Research Program for Stanford undergraduate students
- Bio-X Ventures to fund large-scale endeavours and resources

Bio-X also has educational events for Bio-X participants and for the public.

**Mottagning hos Inger Gustafsson,** Head of Vinnova Silicon Valley Office