

7. CHALLENGES FOR CITY - UNIVERSITY CO-OPERATION IN LINKÖPING

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1. Introduction

This chapter describes the state-of-the-art regarding city-university collaboration in the city of Linköping, Sweden. It opens with a short description of the city and its university (sections 2 and 3). Next, it describes the main co-operations currently in place, based on the “flower” model (section 4) of city-university co-operation. Finally, it shortly describes the main challenges in this respect as identified during the interviews with key stakeholders (section 5).

2. City

Linköping has almost 150 000 inhabitants. It is located in the east part of Sweden, in the province of Östergötland (about 420,000 inhabitants). Since medieval times, it has been a city of learning, with important church functions. Economically, the city is said to walk on three legs: Manufacturing/engineering, high-tech, and the university. Concerning engineering, the city is known as “Sweden’s aviation capital”, thanks to the presence of Saab – since 1937–, which produces aircraft and engines. Saab is a dominant industrial player in the region: it employs 5,000 people in Linköping. Operations include development and production, support solutions and technical maintenance of aircraft. Besides Saab, the city has several other strong and high-tech manufacturing companies. Linköping has a strong and varied high tech base, with particular strengths in clean technology and IT.

The city offers a variety of urban amenities – including an international school – , and has nice natural surroundings. Very nearby is the “sister” city of Norrköping, with about 131,000 inhabitants. The two cities work closely together in a number of fields (to be elaborated later), and Linköping University has establishments in both cities. Linköping has an airport, with frequent connections to Copenhagen and Amsterdam, and is well connected to the Swedish rail and road network¹.

3. Universities

Linköping University (<http://www.liu.se/?l=en>) is important for the city; students and university employees represent 17% of the population. Linköping University was established in the city in 1975. The local industry – with Saab as prominent player – lobbied strongly to have a university, as a source of new staff and as research partner. In the late 1960s a branch of Stockholm University was started in Linköping which later became the independent Linköping University. Currently, it has about 27,300 students (of which 19,000 in Linköping’s main campus), in a variety of disciplines. It has four faculties: Arts&Sciences, Health Sciences, Educational Sciences, and the Institute of Technology.

¹ The Swedish national government recently announced to connect Linköping to Stockholm and Jonkoping by the high speed rail project the Eastern Link

It employs 3,900 staff, of which 1,500 teaching staff. Roughly half of the budget is spent on education, the other half on research. Research funding comes from public sources (50%) and external ones (50%). The “needs based” roots of the universities are still present: the university is particularly strong in applied research, and has multidisciplinary groups that tackle problems and challenges from several angles. Strong fields are (among others) material sciences, visualisation, and industrial ecology.

The university is relatively large in relation to its “captive” regional area: it attracts many students from other parts of Sweden. The university is particularly well known as one where teaching is of very high quality; problem-based learning is the key educational approach, and employers rank graduates very high; In Sweden, the university is known to be one where after graduation, it is easiest to find a good job.

Several interviewees noted that the university is in a transition stage; many of the professors that helped to build up the university from scratch, are now about to retire. A new generation is taking over, with different ideas and perceptions on attractiveness and adequate research and education environments. This has implications for future investments. The university’s main, large campus is located about 4 Km west of the city centre. It is a typical product of the 1970s: monofunctional, and inward looking in urban planning terms. Currently, it is poorly connected to the city, but a highly ambitious new project “LinköpingsBo2016” is about to change that. Through a large investment scheme, a new urban district “Vallastaden” is to be created in the suburb of Västra Valla. It should connect the city to the university, and become an environment full of social and economic innovation, enhancing the city’s attractiveness for knowledge workers.

A second location of the university can be found in and near the academic hospital (3,000 students), where the doctors and nurse teaching takes place. The university is also present in Norrköping (5,500 students). There is a large flow of students between Linköping and Norrköping; some curricula are offered at both locations. The university offers free (frequent) bus trips between the two cities.

Linköping University is welcoming international students, but numbers have decreased recently due to the Swedish law on tuition fees for non-EU-citizens. Some years back, the university had about 600 Master students from abroad. But the number of non-EU-students has dropped to 80 only. In 2011, Linköping University was No 1 in a ranking on student satisfaction of international students.

Currently, the city centre of Linköping benefits only to a limited extent of the liveliness and dynamics of its large student population. Many students live at the campus and in Ryd, a suburb at some 4 km from the city centre, and spend most of their time (and money) there. Over the years, students tend to become more critical on student housing: they don’t want to live in worn-out places but increasingly prefer more luxury accommodation. In response, the city is providing more luxury housing in the city. About 50% of the student residents live in dedicated student houses; the other half rent in the private market.

4. City-university co-operation: an overview

City and university co-operate intensely and very frequently in Linköping. The relations are both formal and informal and on all levels, from the very top level to more student-related relations. The political leaders of the city and the university management meet in formal sessions twice per year. They discuss common interests, exchange relevant information, and together find clues to solve problems. Many of the key city leaders are alumni of Linköping University.

Nevertheless, the need was widely felt, from both sides, to deepen the co-operation. There is an increasing competition – for students and researchers – with other attractive university cities in Sweden, and being complacent would mean losing ground, in the view of key local stakeholders. This mindset led to the establishment of a new strategy of collaboration, and the idea to create a new innovative city district next to (and to some degree integrated with) the university.

In September 2011, Linköping Municipality adopted a “strategy for co-operation with universities”, with the aim to enhance co-operation between the university and the municipal organisation (and other communities). The strategy has 5 main points. The city wants to 1) take an active role regarding student issues; 2) support R&D that is relevant for the municipality, the inhabitants, and local companies; 3) support entrepreneurship and spin-offs from the university; 4) use the academy as a source for training and development at the municipal organisation, and 5) offer the right conditions to attract students and researchers (housing, social conditions, services).

The city-university nexus covers a number of fields. Below is a list of the most important current collaboration activities in the domains as identified in the flower model:

Local/regional economy

- City, university and many other stakeholders in the wider region work together in the Growlink partnership (<http://growlink.se/en/home>), to develop and attract innovative business in Östergötland. The aim is to avoid fragmentation and create a coherent regional area with a good business climate, where innovative entrepreneurs of all sorts are supported. The university, as “trusted key player” co-ordinates the regional innovation agenda of the region (comprising 600,000 inhabitants and 40,000 firms).
- The university has 5 “liaison offices” in the region, where SMEs are brought into contact with university knowledge and competences. Each year, 500 companies are visited to inform the about what’s going on in relevant parts of the university.
- The cities of Linköping and Norrköping are the owners of science parks: Mjärdevi Science Park (Linköping; 300 companies, 2,500 employees) and Norrköping Science Park (Norrköping; 110 firms, 800 employees) are home to successful export-oriented businesses and offer internships and work opportunities to last-year students. Links between business at the science parks and the universities are limited, however.
- New Factory (student/business case-based education and development).
- National Contact Point for the development of professional regional innovation systems (best practice) – The Innovation Office at Linköping University.

- The city sponsors chairs in some promising tech fields, including renewable energies and water supply.
- LEAD is a Business Incubator – Sweden’s largest one. It helps start-ups with growth potential; they can stay for 2.5 years in the incubator.
- CRL (Concept Realisation Laboratory). The laboratory is aimed at strengthen education, and experimental research, in some technology areas, by enhancing and maintaining a capability of producing physical demonstrators, for functional verification and model validation. It is also of high value for training the skills and craft of engineering, needed as experience, to produce science in product realisation.
- Venture Arena (matching ideas and entrepreneurs).
- Tandem recruitments: Attracting excellent academics and offering opportunities for accompanying partners/families.
- Other relevant joint initiatives are the Environmental Technology Centre and the Biogas Resource Centre (strong areas where research and business collaborate).
- This link offers more information on co-operation with businesses: <http://www.liu.se/om-liu/presentation-samverkan?l=en>

Internationalization

- Both university and city see internationalisation as important, and both sides collaborate to their mutual benefit.

Student life

- The LinköpingsBo2016/Vallastaden initiative intends to develop student life in the new area (elaborated below).

Attractiveness/marketing

- The universities’ Innovation Office plays an important role in marketing city and region as knowledge region.
- The LinköpingsBo2016/Vallastaden initiative (elaborated below) is a large common venture to improve the attractiveness of Linköping for students and researchers

Science & society

A number of initiatives are taken in this domain:

- The city is a partner in the “R&D Centre in Care and Social Work” (started in 2000). In this centre, seven municipalities and university work together to innovate and improve practices in these fields, to the benefit of inhabitants that rely on the care and social sectors. The centre develops new methods (often in close partnership of users, researchers and practitioners), and helps to develop competences and skills. It frequently engages in joint projects with national and European partners. The centre has a budget basis of SEK 3.5m (to which additional project money is added); municipalities pay a membership fee. The centre is also involved in the development of Vallastaden.

- The municipal schools & education department co-operates with the university in several ways. Science café's are held, where university researchers can meet teachers; specialist teachers at schools work with researchers in the university; teachers are incentivized to obtain a Master or a licenciate [degree](#) at Linköping University.
- There is a science centre where kids can do all sorts experiments, to enhance their curiosity and creativity.
- The University's Centre for Municipality Studies (founded in 1997) conducts research of importance for municipalities, and offers courses, development programmes and seminars on issues such as urban management, planning, and social welfare. It is financed by 14 municipalities in the region, and has a budget of SEK 10m per annum. The research projects are set up in close co-operation with the founding municipalities.
- Vallastaden (see below) will become a living lab for researchers from Linköping University.
- On many occasions, the city uses/buys university expertise by hiring staff to consult them, conduct contract research, etc. Also, on a frequent basis, the municipality takes students as interns.

Flagship project: LinköpingsBo2016/Vallastaden

Project LinköpingsBo2016 is an integrated urban planning project to connect city and university, and to create an innovative environment in any respect. In the next years, the city and the university will develop an urban environment with community features, schools (including a secondary school for 600 pupils), preschools, care, retail, service, etc. inside and next to the university area. The new urban environment adds new facilities and people to the university area, which creates more buzz and liveliness at every hour of the day. The environment is built for residents (about 2,000 households) including university students, teachers, researchers and those working in the technology park and other companies and businesses in the area. In the words of the deputy mayor: "In 1975 Linköping got a university, now the university gets a city (with the name Vallastaden)". The name was chosen after a consultation of the population.

Vallastaden will be showcased in a housing exhibition in summer 2016, where future environments for living, learning, creative communities and ecological and social sustainability will be shown. Vallastaden will be a place to see and try new solutions, an arena for the University and other stakeholders to connect research into a new urban reality.

The City of Linköping and Linköping University are the main partners in LinköpingsBo2016, but the project has a broad interaction with business, construction companies, architects and others to succeed in its high ambitions. LinköpingsBo2016 also has a mission to work with the new forms of dialogue and participation in all processes of the project. Communication with the city's residents, stakeholders is a major part of the project; there have already been several brainstorming sessions with different stakeholders.

Figure 1. Vallastaden map



LinköpingsBo2016 will be of great importance to the cooperation and exchanges between the city and the university. During the project, several common arenas and forums will be required to control, manage and execute all the activities in the project. These arenas and forums are expected to impact positively on the city-university's partnership.

To achieve the ambitions of LinköpingsBo2016, all parts of the university and the city need to actively collaborate in order to find interesting and innovative solutions for tomorrow's society. The land used to be owned by a state company (that owns the land of universities), but recently, the city bought the land. To realise the ambitions, a municipal company was created; in its board, the university has a prominent role, with two seats. The universities' Masterplan is brought in line with the plans for Vallastaden.

Vallastaden is a sizeable project: the city will invest SEK 50-100m for the infrastructure alone; total investments in the area are expected to amount to €1b.

5. Key issues and challenges

The city of Linköping has identified a number of questions, issues and challenges. The following issues came to the fore during our discussions:

- Attracting and retaining students: How to make Linköping a more attractive city for students; how to retain students? (Currently, many consider the rate of students leaving after graduation too high). How to raise the exposure of local and regional companies to students of Linköping University.
- Research commercialization and entrepreneurship: Supporting students and researchers in the commercialisation of research and create businesses; Developing shared R&D facilities for university/business. Special focus is needed to promote entrepreneurship in the non-technology realms: teacher education, models for collaboration practices in other socio-cultural contexts; service, social and cultural innovations; Linking valorisation to social and demographic urban challenges like ageing.

- Placemaking, identity & marketing: Creating regional strength and profile (connected to the project LinköpingsBo2016); marketing the region together as Knowledge Region. Developing common policies and integrate different activities (student, work, leisure, dwellings) in different parts of the city and provide common grounds for it (mixed-used developments); Attracting and retaining international excellence being a medium sized city; disclosing local and regional values to different target groups (students, professionals, visitors); Involvement of different stakeholders in the development of policies; Student integration in urban living neighbourhoods; Improving the city's/university's "first impression" to students and professionals when it comes to housing, social integration, culture, leisure etc.

Interview partners:

Mats Arwidson, Deputy University Director, Linköping University

Jan Axelsson, Chief Strategy Officer MSc, Ph D, Ass. Professor, Innovation Office at LiU, Linköping University

Anna Bertilsson, Director, Department of Environment and Urban Planning, City of Linköping

Hans Bjurbäck, Project Manager, East Sweden Region, Baltic Network.

Muharrem Demirok, City Commissioner, City of Linköping

Elisabeth Ekström Ulvenäs, Planning Officer, City of Linköping

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