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/LOCAL ACTION PLAN KRISTIANSAND

GenY City 2018

CONTENTS

INTRODUCTION

This is Kristiansand's *Integrated Action Plan*, prepared in connection with GenY City. GenY City is an international project that is part of URBACT III, a programme for experience exchange and mutual learning between cities that will contribute to developing the cities of Europe. The focus of the GenY City project has been on how to attract, develop and retain generation Y in the cities. The project is managed by Poznan (Poland), with project partners from Bologna (Italy), Genoa (Italy), Sabadell (Spain), Granada (Spain), Coimbra (Portugal), Nantes (France), Wolverhampton (UK), Klaipeda (Lithuania), Daugavpils (Latvia) and Torun (Poland).

Generation Y is a term for the generation currently working its way into working life. This generation has grown up in a global world in constant change; they have experienced little need or financial worries, are resourceful and independent and cannot be guided in the same way as previous generations. They are the first generation to grow up in a world where technology is a natural tool and large amounts of information are available at all times. They appreciate flexibility and want to work and live when and where they want.

The partners of the GenY City project have shared their experiences in terms of how the cities can attract, develop and retain their young population. The cities have focused on various challenges such as facilitating creative business, entrepreneurship, identity and digital skills. Kristiansand has together with other partners focused on digital and technological skills that are important to the trade and industry now and in the future.

The methodology adopted in the project is to explore current challenges in order to identify functional measures to improve the situation. This report starts with a presentation of Kristiansand and its history to provide a solid basis for understanding the current situation. It then presents a challenge description based on the municipality's annual appendix to the action programme: The 2017 Challenge Description for Kristiansand, development trends, challenges and opportunities. The challenges of the voluntary operators within this area are also presented. Based on these challenges, efforts have been developed to attract, develop and retain the young population in the cities.

BACKGROUND

KRISTIANSAND, AN INGENIOUS CITY WITH AMBITION

Kristiansand is the fifth largest city in Norway, and the largest city in Southern Norway with just over 91,000 inhabitants[1]. It is an old trading town that was founded by Danish King Christian IV in 1641. The city lies on the southern tip of Norway and has been, and still is, a focal point towards Europe. The city was founded on a sand bank by the outlet of the river Otra, and the first town plans were approved by the King in 1642. The town plan has a strict grid design, and Kristiansand is Norway's only consistently developed renaissance town. The centre is designed with streets of equal width and constructed by blocks that together form a square, at town pattern that remains unchanged to this day. Fully developed, the original urban plan was meant to accommodate 15–20,000 people in the city centre called "Kvadraturen", while it is now home to just under 7000.

In the first two centuries of the town's history, trade and shipping and the associated craft activities constituted the most important basis for business. Trade was largely aimed at foreign countries, which meant that the economic situation in Europe had a strong impact on the town's development and growth. This is also reflected in the population growth developing slowly and unevenly in proportion with economic conditions and wars on the continent. The 19th century and the beginning of the 20th century saw the development of several industrial companies and shipyards, and many of them are important companies today[2].

In 2016, 23.8 % of the population was under 18 years of age, 16.5 % was between 18–29, 46.8 % between 30–66 and 13 % over 67[3]. Since the college in Kristiansand achieved its university status in 2007, the number of students has increased from 5700 to 12,000 and the number of employees from 540 to 1200, divided over two campuses in Kristiansand and Grimstad. The university boasts an extensive study offering with a wide range of subjects across bachelor's, master's and doctoral programmes, as well as an array of one-year and half-year programmes and further training courses. The programmes are characterised by the multidisciplinary and vocational study programmes for the health and social sector, teaching, technology, administration subjects and economics[4]. Trade and industry in Kristiansand and the surrounding region is characterised by world-leading companies in several fields and with competent employees. Some of the largest companies operate in the energy sector, either as suppliers to the oil and gas industry or as renewable energy manufacturers.

[1] Per September 2017
[2] https://www.kristiansand.kommune.no/politikk-og-administrasjon/om-kristiansand/historikk/
[3] SSB: table 07459, composition of population 2016 in the Statistics Portal
[4] https://www.kristiansand.kommune.no/politikk-og-administrasjon/om-kristiansand/om-kristiansand/

Kristiansand also boasts a rich cultural life and some of the most impressive, urban recreational areas in the country. Natural conditions with a milder climate, a beautiful coast line and short distances to forest and field, along with great experience-based tourism make the region an attractive tourist destination, particularly in the summer months. With all sorts of festivals, Kristiansand and Southern Norway is rightfully referred to as the festival region hosting international festivals, food and beverage, music, drama, film and other cultural festivals, to mention some. The Kilden Performing Arts Centre accommodates all types of cultural expression, such as pop, rock and stand-up, and it is also home to Agder Theatre, Opera South and Kristiansand Symphony Orchestra[5].

In the society section of the recently adopted municipality master plan, the aim is for Kristiansand to be *an ingenious city with ambition*. According to the mayor, the city should be a city of leading innovative competency that people want to move to and live in. The vision should unify and inspire collective development and change. The population should want to create something together, for each other, for the city and for the region. Through collective knowledge, business and culture development, the city utilises its resources and includes everyone in its community. The aim is to strengthen the standing of the city and lift the region as a whole[6].


Photo: Landskapsfotografene

[5] https://www.kristiansand.kommune.no/politikk-og-administrasjon/om-kristiansand/om-kristiansand/
[6] https://www.kristiansand.kommune.no/globalassets/kristiansand-mot-2030-20.9.2017.pdf

CHALLENGE DESCRIPTION

The 2017 Challenge Description for Kristiansand[7] addresses the main challenges of the city. Kristiansand is affected by global megatrends related to climate change, demographic change, globalisation, urbanisation and digitalisation.

Globalisation leads to international integration and an exchange of information, trade and culture. The world seems smaller, because we can communicate better and more efficiently despite geographical distances, and society is becoming increasingly multicultural. Increased globalisation also leads to increased competition to attract business activities and skilled workers.

A large part of the world's demography is affected by decreasing birth rates, increasing migration, increased average life expectancy and new health issues. The elderly population in Norway is increasing, while the working population will begin to decrease. The strong growth in the elderly population combined with a decreasing working population will pose a great challenge for the municipalities leading up to 2040. Due to a relatively young population, these consequences will affect Southern Norway somewhat later than in other parts of the country.

Digitalisation is the most powerful trend of our time, and it influences most aspects of society. Communication is less location-dependent, access to information is almost unlimited, robotics and automation are replacing jobs and creating new ones. Our workers set new requirements and expectations to work content and locations. The competition for both jobs and workers is increasing.

DEMOGRAPHY

The Kristiansand region has the advantage that many young people will be entering the job market in the coming years. The composition of the population is characterised by the percentage of young people (between 0–24 years of age) being above average. The Challenge Description outlines this as both an opportunity and a challenge. It will be important for the region to create new, attractive jobs for the younger population to prevent them from relocating or becoming unemployed.

[7] https://www.kristiansand.kommune.no/globalassets/politikk-og-administrasjon/planer-og-prosjekter/budsjett-og-handlingsprogram/hp-2018-2021/utfordringsbilde-2017-nett.pdf

According to the Challenge Description, Norway has since the 1960s seen a significant centralisation towards the large urban regions. The cities have the highest productivity rates and the strongest growth in value creation. This is strongly connected with the skills of the population; the cities have the fastest growing level of education, and their populations have higher educations. Agder has experienced growth in population and business development in the last 10–15 years, but it has been unevenly distributed. The strongest growth has been in the Kristiansand region and the other coastal municipalities.

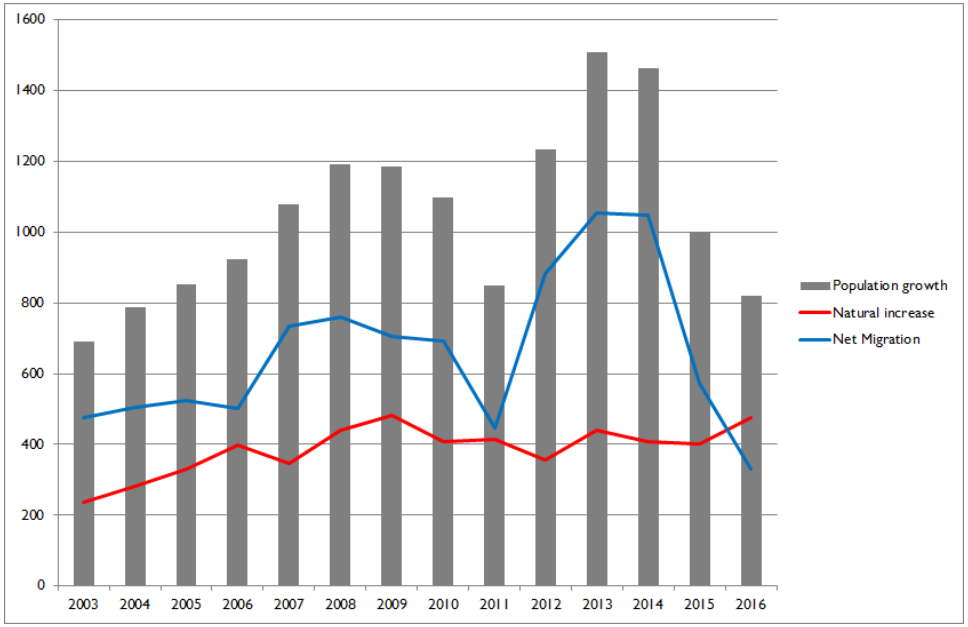


Figure 1: Population growth, excess of births and net migration. Source SSB, edited by Kristiansand municipality.

In September 2017, the population figure in Kristiansand passed 91,000 inhabitants. There has been an increase in the last six months, but the graph indicates that the population growth has been in decline since 2013. It is important for the city to attract inhabitants, but also to retain them. We therefore need to turn the decline of these last years back into the positive population development we saw in the period 2011–2014.

INDUSTRY AND EMPLOYMENT

Agder has a varied economy where the growth in value creation in recent years is associated with the petroleum industry and the process industry. However, a uniform business structure renders the region vulnerable. Many of the businesses are export-oriented and therefore affected by the economy and the fluctuations in the market. Both the growth in global trading and the international political situation affects this industry.

The petroleum industry is currently in decline, and this has consequences for the region. In order to contribute to future growth and value creation, it is crucial that we strengthen our work with skills development and adaptability, as well as promote the development of new industries. It will mean significant adaptation challenges for business development and public services in the next 20 years. This is probably one of the greatest individual challenges facing the region.

According to the 2017 Challenge Description, Kristiansand has a varied economy and several world-class business clusters. These clusters include companies in oil and gas technology, the process industry and travel. These industries are very different in terms of total turnover, employment and earning.

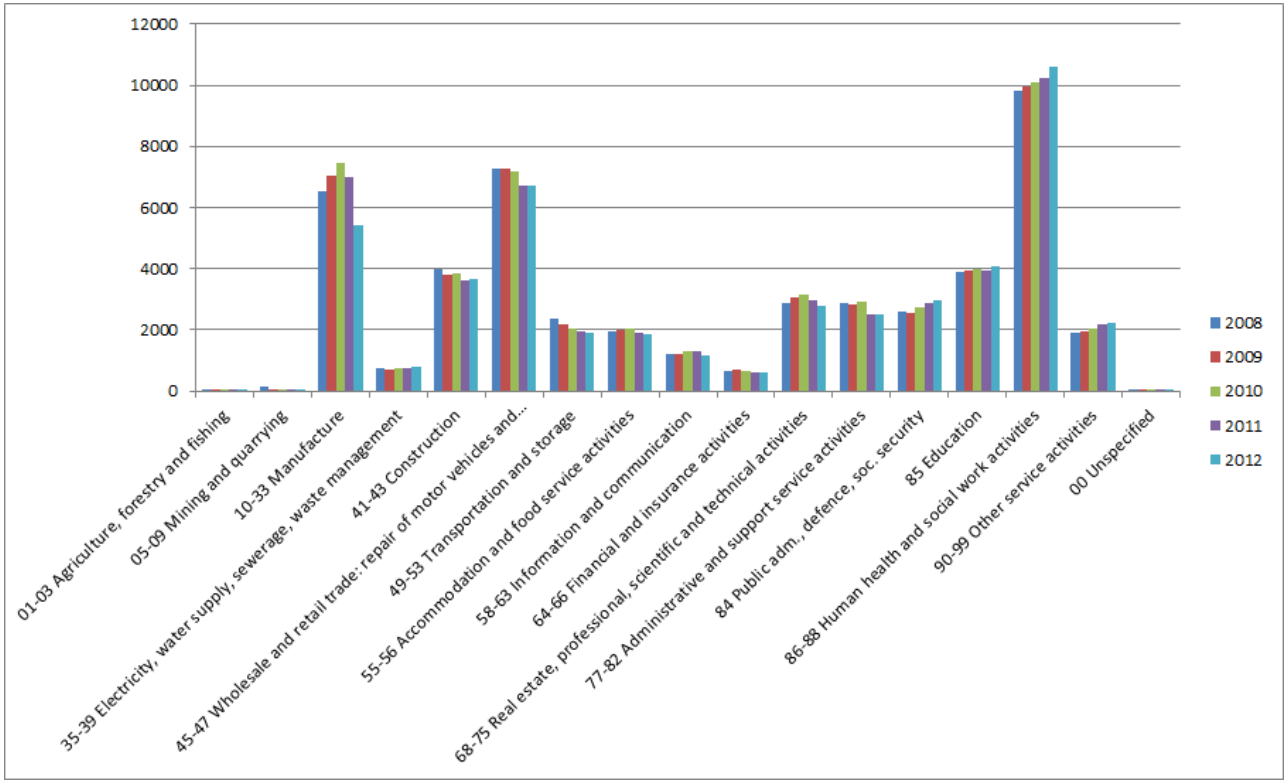


Figure 2: Workplace development, main groups in Kristiansand 2012–2016. Source: SSB.

As the table shows, the industry saw an employment growth leading up to 2014, but there was a decline in 2015 and 2016. This was due to plunging global oil prices and suspended projects all over the world. This affected the region's suppliers to the oil and gas industry. The supplier industry has represented a significant part of the total sales in the region, and a third of the industry's export business from Norway. Little to no demand in the years following 2014 has posed a challenge for the industry and lead to severe workforce reductions.

The process industry is still growing in the Kristiansand region, and in Agder as a whole. Many of the businesses are internationally owned and hold strong market shares in a global market. Several have long histories and have proven their ability to adapt, improve their efficiency and face the challenges of our time. The process industry has in recent years been concerned with innovation and targeted R&D efforts for reduced energy consumption and greenhouse gas emissions, which will give the businesses a competitive edge in the future.

The travel, adventure and culture industry cooperate within the USUS cluster. The adventure business is an important growth industry within the region, but it is characterised by low profitability and large seasonal fluctuations. Summer is the most important time of year for the travel industry, but there are tendencies towards increased activities in the shoulder seasons. The industry is also affected by external factors such as the weather and the NOK exchange rate. The oil recession has also affected this industry.

If we compare Agder to other counties, the level of manufacturing employment is substantially higher. At the same time, Agder has a substantially lower percentage of knowledge-intensive enterprises. A stronger ICT industry will have great significance for the local industry in the years to come. Strong ICT environments are important because they increase profitability, productivity and efficiency in other businesses. The ICT industry / ICT knowledge will also contribute to solving the future challenges of manufacturing, the supplier industry and societal challenges such as climate, health and welfare. The Challenge Description also mentions Abelia's statement regarding the need for a massive increase in ICT knowledge if Norway still has ambitions to be a leading technology and industry nation.

The ICT industry in the region consists of several smaller companies, and unlike the other industries, there are no major driving forces in the region. According to the Challenge Description, several of the ICT businesses in the region have their strength in IT security, a strength which is now being developed further. However, there are opportunities for developing new businesses within the ICT industry and related businesses. The data centre N01 Campus Vennesla is under construction. Currently, there are 300 hectares available, with a potential of 3.6 GW of energy. This gives Campus N01 the potential to become the largest green data centre in the world, which will attract international customers and provide opportunities for local industry.

The Confederation of Norwegian Enterprise (NHO) recently published a report on the new jobs in Norway[8]. Automation, robotics and digitalisation will lead to changes in employment trends in Norway. It will lead to jobs becoming obsolete, but also an opportunity to create new jobs. The author of the report, Steffan Fölster, claims that digitalisation may lead to new jobs and the development of new digital technologies and IT systems, or the production and provision of services that enable digitalisation. Fölster also asserts that Norway will be ranked as number seven in Europe in terms of "brain businesses", i.e. jobs in knowledge-intensive companies, while also noting the issue that Norway has a lower percentage of young people with a higher education in natural science and technology. He also claims that Norway has great prerequisites for success in the digital revolution, among other things because of the population's ability to adopt new technologies.

[8] https://www.nho.no/siteassets/nhos-filer-og-bilder/filer-og-dokumenter/ak-2018/nho_ak18_rapport_norways-new-jobs-in-the-wake-of-the-digital-revolution_1-6.pdf

In order to accommodate future requirements and development, work on developing, attracting and retaining people with digital skills in the region will be important both now and in the future.

According to the Challenge Description, the unemployment number is an important indicator for measuring employment within the municipality. Unemployment is also an important factor from a public health perspective, because a minimal association to the working life makes people more vulnerable to health issues. The Kristiansand region experienced a higher unemployment rate in 2015 and 2016, but the rate has been somewhat reduced in 2017. Retaining competent workers in the region is a challenge. On a general basis, we might say that people who have gone through higher education cope better with change than people with a lower education. The ability to develop and utilise new knowledge is an important competitive factor for Norwegian industry. Report to the Storting no. 7, 2014 states that this is crucial for change in existing industries or as a basis for new industries.

In 2017, the job market situation in the region is somewhat stabilised and improved. At the end of August 2017, 3.6 % of the working population was fully unemployed. This indicates that the industry in the region has managed to capture many of the unemployed, while some have chosen to study, and others have moved away for work. Even though employment is relatively low, the number of jobs in the region has not gone up, indicating that more people have withdrawn from the working population.

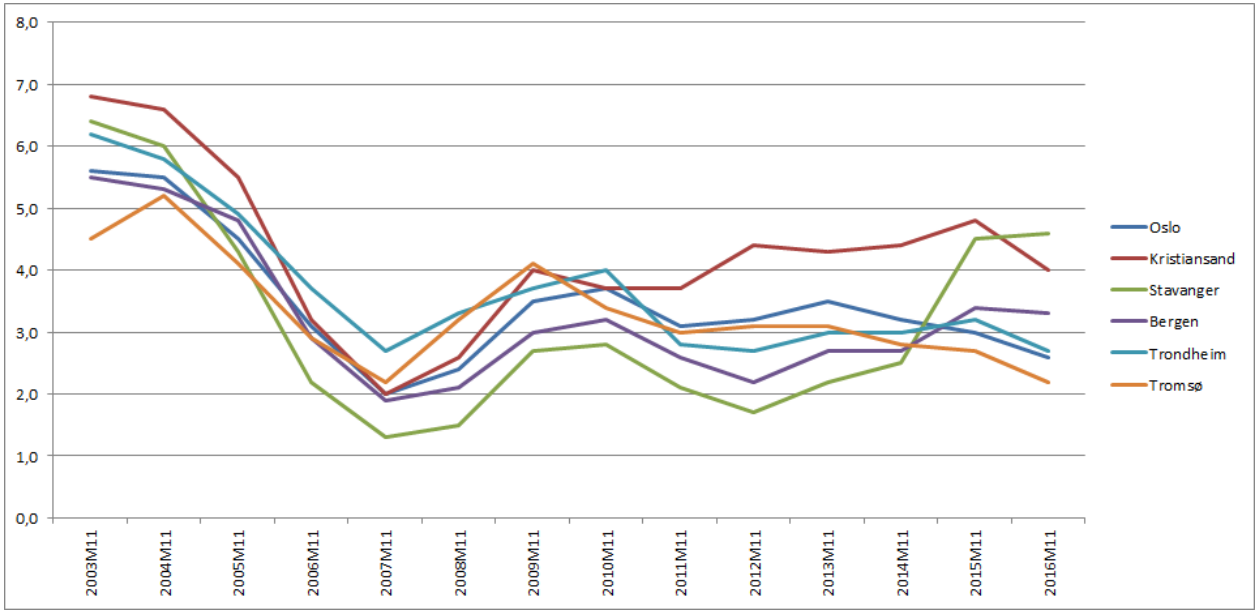
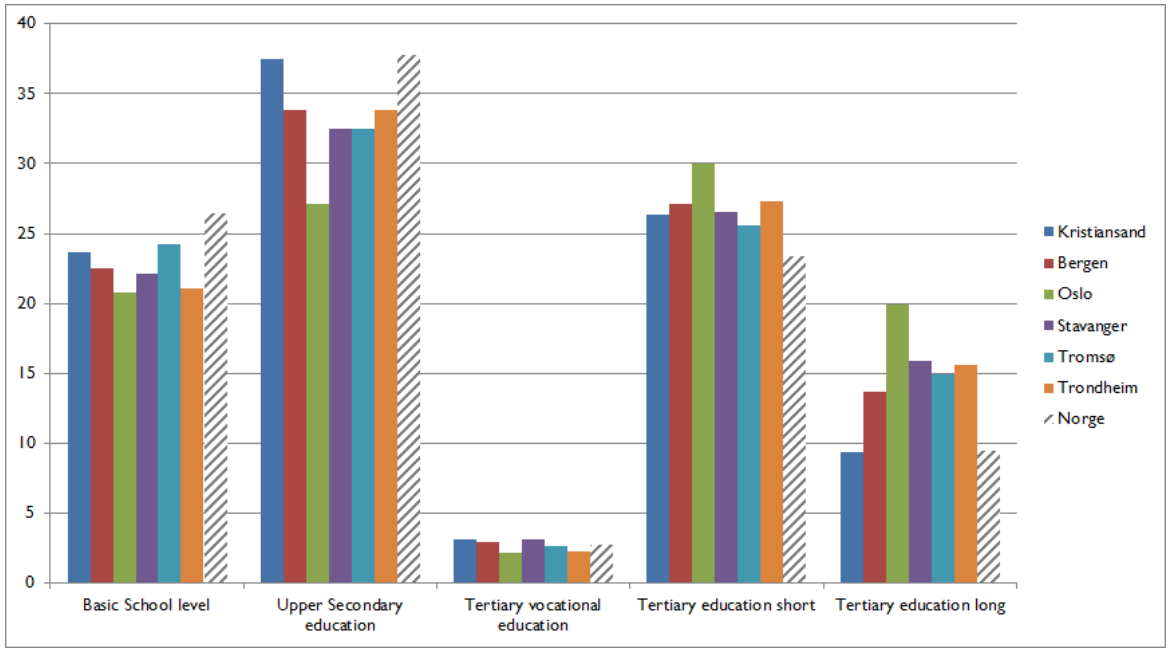


Figure 3: Registered fully unemployed 15–29 years of age, 2003–2016. Source SSB.

Youth unemployment tells an important story of society's ability to include those who are at the start of their working life. Like the figure above, this indicates a higher unemployment rate among young people, which is worrying.

CHILDHOOD AND EDUCATION

The Challenge Description states that there are five basic skills that are important in primary and lower secondary school; coping with digital tools and media, oral skills that involve creating meaning through listening, speaking and conversing, and knowing how to read and write. These skills are highlighted as crucial for making progress in life, both in terms of education and work.



Every other year, the data collection scheme Ungdata conducts a survey to reveal the living conditions of young people in the region. In 2016, the survey revealed that young girls spend more than two hours a day on social media, in addition to watching television. 38 % of boys spend more than two hours a day playing computer games. Inactivity and spending time on social media / computer games can lead to increased social isolation.

Figure 4: Level of education among people in the municipality over 16 years of age in percentages, 2016. Source SSB

According to the Challenge Description, the population in Agder and Kristiansand has a lower level of education compared to other cities. The table indicates that the majority of people in Kristiansand have undergone upper secondary level education, while the percentage of people with long university and college educations is relatively low. The parents' level of education affects the children's performance in primary and lower secondary school, as well as their prerequisites for completing upper secondary school and embarking on higher education. At the same time, fewer people finish their education after only completing primary and lower secondary school, and the number of people completing higher education is increasing. According to the Challenge Description, the need for unskilled workers has been in decline and will based on calculations be 16 % of the labour force in 2030. It is therefore important to increase the percentage of people completing upper secondary school and qualifying for higher education and/or work.

The above figure indicates that 35.7 % of employed people in Kristiansand have higher educations, both long and short. Formal education is a key factor for social development, and it is also important for economic development and adaptability. Since the college in Kristiansand achieved its university status in 2007, the number of students has increased from 5700 to 12,000. Despite the increased number of students, this only covers 80 % of the need for education in Agder, indicating that the region needs to attract more highly educated workers to acquire the necessary skills, while also attempting to retain the students after they finish their degree.

AN ATTRACTIVE CITY

An attractive city has to offer qualities such as great welfare, sound childhood conditions and a diverse cultural offer, as well as exciting jobs. It will also be important to create solid connections to other cities to expand the home and job market, and we need to facilitate physical framework conditions to develop an attractive student city. Agder University is therefore important for the attractiveness of the city, and the number of applications to the university is showing a significant increase in top priority applicants through the Norwegian Universities and Colleges Admission Service (NUCAS).

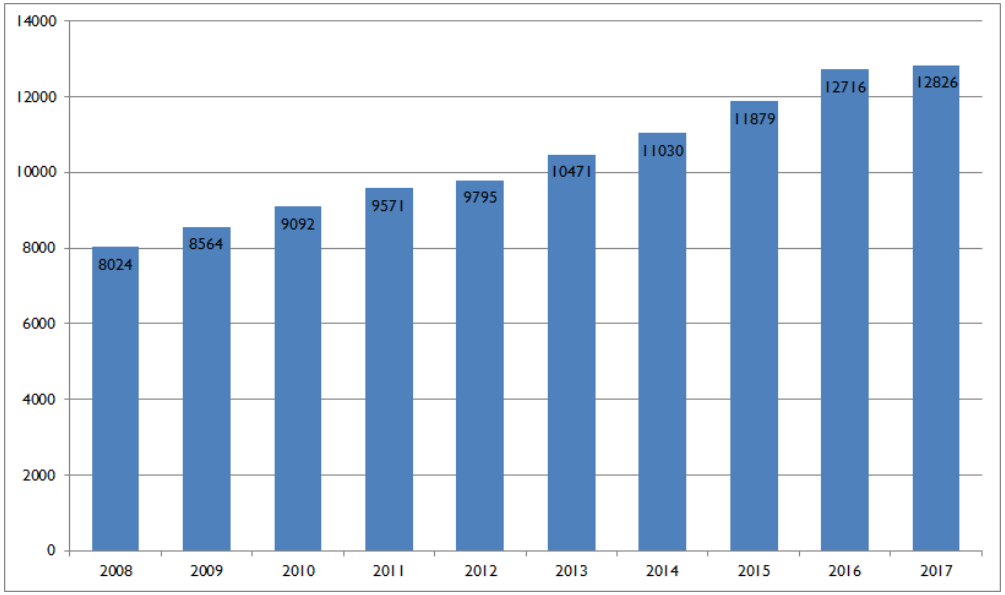


Figure 5: Number of students at Agder University, 2008–2017. Source Agder University

The municipality and the university share a vision of developing Kristiansand from merely being a city with a university to be a full-blown university city. The university culture should influence the city in terms of generating subcultures and establishing arenas for alternative environments. It will be important to take strategic action with regard to town plans in order to develop the city and strengthen its urban qualities. This long-term work requires continuous focus and strong coordination across units, sectors and in close dialogue with other operators. The most important urban planning challenge going forward will be to develop the 2.5 km axis between campus and the city centre; the university city axis.

KRISTIANSANDS CHALLENGES

As we have seen in the previous chapters Kristiansand has some challenges that need to be addressed. The region has a relatively high share of young people compared to other regions, but the unemployment rate among the young are higher, that is something to be concerned about. There are more young people who do not complete high school and becomes drop-outs. It will therefore be important to increase the number of students that completes upper secondary school and qualifies for higher education and/or work. One of the five basic skills that is promised in order to cope with education and working life is to be able to use digital tools and media. At the same time, young people today use more time in front of the screens, and Ungdata survey reveals that those who spend a more time on the data also have less faith in their own future. It is therefore important to work with the young people who are in this segment that can control digital tools, but does not believe in its own future. They must be acknowledged for the knowledge and the skills they acquire and see it in a context. They must be given space and opportunities to develop their skills.

The uniform industry structure makes the region very vulnerable. In addition, the industry in the region is characterized by being based on lower education, and the region has relatively small share of knowledge-intensive businesses. Robotization, digitization and automation are on the way into the businesses today. The development goes fast and there is a need for competent staff with digital and technological skills. It is important that the region develops these skills and works to give the young people (future labor) opportunities in the region to attract and develop jobs in the region. In addition, efforts must be made to attract skilled labor to meet the need for the competence in the region now and in the time to come.

By developing digital skills among children and young people, they can be qualified for the present and future labor markets. It will also be important to take action to keep students after graduation, show them the opportunities for relevant and interesting work in the region. The region must attract and develop new jobs and preferably within knowledge-intensive industries. ICT industry represents this industry, and will also be important for the development of other businesses.

THE CHALLENGES OF THE OPERATORS

Through the GenY City project, we have gathered some of the volunteering digital and technological operators in the city. They engage focus on various areas within the digital and technological field, and helps to meet today's challenges. It has been important for the project to work with these actors and understand how the situation is for them, and what challenges they have. It would give a better understanding of some of the root causes of the challenges that Kristiansand has today. Kristiansand municipality has through different sectors been in contact with some of the various actors, but the city and society and industry have not cooperated together before. During the project period we have spent some time getting to know each other and get an understanding of what everyone stand for and what they do. Some of the operators have participated through the entire project period, while others have become involved along the way. Before we take a closer look at the challenges faced by these operators, we will present them in the following sections.

The Girl Geek Dinners

The Girl Geek Dinners is a voluntary organisation that organises meeting places for women in the Kristiansand region who are interested in technology. The aim of the Girl Geek Dinners is to gather and showcase the capable women working with programming, design, communication, marketing, robotics, etc., and others who know technology or want to know more about it. They help to give women in the industry a network, knowledge fulfillment and thus help to keep critical expertise in the region.

Sørlanet

Sørlanet is a member organisation that organises the largest data party in Southern Norway, and one of the longest-established in Norway of its kind. The data party goes on for several days and gathers hundreds of kids during the autumn holiday. The data party is a meeting place and social arena for young people playing data. This helps them meet like-minded and develop their skills.

The Study Associations Systematicus and Beta

Systematicus and Beta are the study associations of the information systems students and the computer engineering students, respectively. These study associations aim to generate camaraderie among the students and build identity. They also work to connect the students with local industry, and they do this through various academic and social events throughout the academic year.

Lær Kidsa Koding

Lær Kidsa Koding (Teach Coding to the Kids) is a voluntary organisation working to teach children and youths how to understand and manage their role in the digital society. It is a national movement wanting to contribute to youths not only becoming users, but also creators of technology. They do this by organising coding clubs across the country. These coding clubs are in principle open to everyone, free, creative, fun, open and inclusive. In Kristiansand, the coding club has been held at the library and has organised various courses in recent years.

NEXUS

NEXUS is a new initiative in the start-up phase. The people behind NEXUS are looking to start a business that provides gamers and eSports athletes with an arena to meet and hang out. They want to open a café where activities are shown and played in digital arenas/surfaces.

The Library

The library's job is to store, catalogue and lend out books and other forms of media, and it is anchored in public education. Its function is to meet the existing need for knowledge and information in society[9]. In addition to books, the focus of the libraries has in recent years been on offering ICT services in terms of both access to computers and equipment, and courses and training. The Kristiansand Public Library has served as the location for the local coding club in Kristiansand, and is thus arenas that develops digital skills among children, young people and grow up.

The Department of Information Systems at Agder University

The Department of Information Systems provides teaching and research at the intersection of technology, organisation and finance. The department provides teaching for one-year, bachelor's, master's and PhD students, as well as individual subjects that are part of other study programmes at Agder University[10].

Aftenskolen

Aftenskolen is a non-profit enterprise offering various courses and training. Classes are usually held in public educational facilities in the evenings. They offer courses in language, social studies, careers, leisure and culture, as well as creative courses. In 2017, Lær Kidsa Koding hosted no activities. It took time finding volunteers, so Aftenskolen assumed the responsibility of initiating activities for children in this field.

[9] https://no.wikipedia.org/wiki/Bibliotek
[10] https://www.uia.no/om-uia/fakultet/fakultet-for-samfunnsvitenskap/institutt-for-informasjonssystemer/om-instituttet

The Childhood Sector

The responsibility of the childhood sector in Kristiansand municipality includes the operation of kindergartens and schools in the municipality. Kristiansand municipality has been appointed as a natural sciences municipality and has strengthened its efforts in the field with an extra hour of nature studies in the fifth to seventh grade, among other things. A separate natural sciences strategy is also underway. The municipality action programme[11] states that there needs to be a holistic implementation of skills for the 21st century, and that more emphasis must be placed on ICT in schools. A new strategic ICT plan will also be developed. The childhood sector has also granted financial support to Vitensenteret Kristiansand (the Science Centre), which opened in January 2018. Vitensenteret aims to increase the skills and interest in natural science and technology among children and youths.

The childhood sector has been informed of the project and their common goals in terms of ICT efforts. The sectors have discussed their challenges, and shared information and experiences between them. One of the challenges highlighted by the childhood sector is the low level of knowledge among teachers in the digital and technological field, for example in terms of programming and coding. They therefore asked that the project would challenge the student teachers to get involved in voluntary activities such as Lær Kidsa Koding. This would provide the students with practical teaching experience, while also enabling them to develop coding and programming skills.

The Challenges

In the first ULG meetings, the challenges of the operators were discussed in plenum. Some of the challenges were common for several of the operators, while others were specific to the individual operator. The greatest challenge revealed was that the operators hardly knew about each other and what the various operators do. Coming together in this project has helped remediate this. Another challenge is to make the offerings of the various operators known to the public and raising the attendance for their activities. Raising the knowledge of these offerings will also contribute to showcasing and unifying this environment in the region.

The operators all experience various degrees of negative attitude, comments, questions, lack of understanding and stigma. There is little understanding for digital skills being triggered and developed through computer games, programming, coding, hacking and gaming. Sports activities and music are considered “better” leisure activities, although spending time in front of the computer can provide useful knowledge and experience. The operators argue that gamers gain a solid understanding of language, as a large portion of the gaming often ventures across borders and is conducted in English. People who spend time on gaming can also become more observant, often notice more

[11] https://www.kristiansand.kommune.no/globalassets/politikk-og-administrasjon/planer-og-prosjekter/budsjett-og-handlingsprogram/vedtatte-hp/vedtatt-handlingsprogram-2017-2020-pdf.pdf

details, are strategic and collaborative. Gamers often use consoles, controls and joysticks, which generates experience that may be transferable to working life in terms of drone operation, oil rig operation, robotics or other technological equipment.

Several of the operators are voluntary organisations aiming to offer low-threshold activities to children and youths. They are in other words organisations with no financial muscle to back them up. The operators need suitable premises in which to organise their activities, but the activities they offer require infrastructure such as internet/fibre connection and power supply. Some operators also need equipment such as computers, micro bit sets, etc. This in addition to external factors makes it difficult to find suitable premises for the various activities.

Voluntary organisations are completely dependent on volunteers. Individual organisations often depend on enthusiasts, which makes them vulnerable. If the enthusiasts wear themselves out, an organisation with few enthusiasts will suffer. It is important to enthuse and motivate enough volunteers and increase their capacity to run the organisations. This will reduce the vulnerability of the operators. The voluntary organisations often also struggle with varying management, little continuity and lack of experience exchange between them. This leads to a lot of work having to be done again year after year, instead of improving what has been done before.

The information systems and computer engineering students at Agder University have little knowledge of the job opportunities in the region after they finish their degrees. The region has many IT companies, but no major driving forces that contribute to highlighting the digital and technological environment, and there has been little contact between local industry and the students at Agder University.

For start-ups in areas of digitalisation and technology, the lack of venture capital is one of the major challenges. It is still more profitable to invest in property than high-risk start-ups. Another challenge is that the public sector has to comply with tender regulations, which is also noted as a challenge faced by young companies with little experience. Additionally, programming and coding is to an increasing degree outsourced India, for example, where wages are lower compared to Norway.

THE PROCESS

The work in this project has been based on dialogue, meetings and follow-up on individual operators. Joint meetings have been conducted where all operators have been invited. These meetings have provided an arena for the operators to get to know each other. The various challenges faced by the operators have been discussed in the joint meetings, and the participants have provided input on how similar challenges are being solved elsewhere. There have also been individual meetings with the various operators to gain a better understanding of each operator, and to establish what can be done to address their challenges. Additional follow-up has been conducted via e-mail and telephone when necessary.

The actors are all volunteers and are working hard to keep their core activities going on. In the project we have had respect for the time for the volunteers, and their participation has been appreciated. There have been different attendance at the joint meetings and some of the planned meetings have been canceled due to lack of participation. Therefore, it has worked well for our project to have some public meetings and further follow-up of the actors individually.

Fellesmøter	Individuelle møter
Joint meeting, 13.10.2016	07.09.2016 – Meeting with the childhood sector
Joint meeting, 13.12.2016	09.09.2016 – Meeting GenY
Joint meeting, 18.02.2017	14.09.2016 – Meeting with the Department of Information Systems, UiA
Joint meeting, juni 2017, avlyst	07.10.2016 – Meeting with Evry
Joint meeting, 23.11.2017	09.01.2017 – Meeting about Hackathon
	11.01.2017 – Meeting with Egde Consulting
	28.06.2017 – Meeting with NEXUS
	09.08.2017 – Meeting with Sørlanet
	05.09.2017 – Meeting about Lær Kidsa Koding, Aftenskolen
	11.09.2017 – Meeting about Hackathon
	02.10.2017 – Meeting with Sørlanet
	25.01.2018 – Meeting about Lær Kidsa Koding, Aftenskolen

The work in this project has increased knowledge among the actors and helped to build a foundation for further cooperation between the different organizations in this environment.

ACTIONS AND SCHEDULE

During the project period, many different activities have been launched to meet the challenges. The activities mentioned below are initiatives that the project actors want to initiate, or have started since the start of the project. It shows that there are many actions that go against same goal across sectors and organizations. There has been limited time in the project period, and there are some challenges the project has not managed to develop good measures on, but we will continue to work on the time to come.

CHALLENGES:	The region has different environments and actors operating in the field of digital skills. There are actors who develop skills, others who provide a social environment and network that helps them with these interests get an environment and network with like-minded people. Several of the players are, among other things, represented in this project. The activities and actors are little known in the region and they have little knowledge of each other. The actors also feel little acknowledgment of the work they put down, and that what they do is useful for the future's working life. The challenge is to build pride among young people who develop digital skills, recognize these skills, showcase the actors and what they offer, as well as show students and employees that there is an environment for technologists. The pride can be built and the knowledge of the actors can be enhanced by making a film showing aspects of developing digital skills, as well as showing the players and the environment in the region. The actors are recognized and appreciated.
EXPECTED RESULT:	Raise awareness of actors who develop and help keep digital and technical youth in the region. It can contribute to increased participation in the activities, increase the number of volunteers and recognize the actors for the work they do.
ACTION:	Make a short film showing the different actors and appreciating digital skills in the Kristiansand region.

Activities	Lead Actor	Partners	Output	Timescale	Resources
Make a movie, in about 2.5 minutes. The film will be mostly featured in social media, but can also be used in other contexts.	Kristiansand municipality	The Library Lær Kidsa Koding Systematicus Girl Geek Dinner Sørlanet NEXUS	A movie that can be shared in social media that helps to reach the goal.	Jan-march 2018	Hours from the different actors. 50 000 kr for filming and editing, Kristiansand municipality

CHALLENGES:	IT and Computer Engineering students studying at the University and Noroff have little knowledge of the opportunities in the region after graduation. They have little knowledge of each other and the digital and technological environment in the region. Creating an arena where students can develop their skills, get acquainted with some of the work opportunities in the region and build the environment in between them can help to meet the challenge of retaining students in the region after graduation.
EXPECTED RESULT:	Acknowledge the students, trigger their skills, build the environment among the students across disciplines and educational institutions as well as increase the knowledge of the businesses in the region. The goal must be to keep more students in the region after graduation.
ACTION:	Arrange a 24 hour hackathon for the students. A hackathon is a 24 hour idea contest, where students get a challenge to be solved using open data. Students make solutions by combining different data in new ways that can be used for product and service development. In this way, students' skills are triggered, while working together and spending a lot of time together. Something that can help build the environment. By involving local businesses, we also get connected with the business community and the professional environment.

Activities	Lead Actor	Partners	Output	Timescale	Resources
Arrange a 24 hour hackathon	Systematicus	Kristiansand municipality	Give access to open data	Dec. 2017-Feb.2018	Working hours to find relevant data and make the data available. Working hours and networks to give students access to open data outside their own organization.
		Egde Consulting	Egde takes social responsibility and profiles to relevant students. Gain insight into the students' knowledge	During the hackathon	Contribute with their own consultants as counselors for the students. Prize for the students, invitation to Egde-party and possibly a handy prize as well.
		Systematicus	Get the frames for the hackathon in place, location and food.	Nov. 2017-Feb.2018	Borrowing location by the University. Apply funds from the Cultural Book Fund, NOK 15,000 Seek funds from the municipality.

CHALLENGES:		The students at the University get a lot of good and relevant knowledge at the University, but lack practical experience. In addition, as mentioned above, the students have less knowledge of local business and current jobs in the region.			
EXPECTED RESULT:		Give relevant experience to the students and visualize the activities in the region. Increase the proportion of students who get relevant jobs after graduation and increase the number of students remaining in the region after graduation.			
ACTION:		Allow students to write relevant bachelor and master's theses and have practices in the region's businesses.			
Activities	**Lead Actor**	**Partners**	**Output**	**Timescale**	**Resources**
Refresh IT	University of Agder, department for information systems	Digin, ICT-cluster	Be the door opener for students to business	May-Sep.	Working hours and networks to find relevant and good cases from businesses in the region that student can work with.
		CoWorx	Give the students an entrepreneurs perspective	Mai-Sep.	Working hours and networks to find relevant and good cases from start-ups in the region that student can work with.
		The University	Get the frames for Refresh IT in place.	Sep.	Location: CoWorx Food: UiA
		The University	Showcase the students' work. Presentation of student projects	Nov.	UiA

CHALLENGES:	The working life of today and the future requires people with digital and technological skills. As mentioned earlier, managing digital tools and media is considered one of five basic skills for the generation that grows up. In elementary school today, programming and coding are not part of the education, so students gain little knowledge and experience in this area through school. There are also few teachers who have knowledge in programming and coding, making it challenging to teach students.
EXPECTED RESULT:	Digital knowledge becomes a major part of schools in Kristiansand
ACTION:	STEM-strategy

Activities	Lead Actor	Partners	Output	Timescale	Resources
STEM-strategy	Kristiansand municipality	Nettverk i naturfag, Rettverk i matematikk, Rektorutvalg, UiA	STEM-strategy	2016-2017	Working hours from the actors

CHALLENGES:	Lack of knowledge of coding and programming among primary school teachers
EXPECTED RESULT:	Several teachers who master and can teach coding and programming
ACTION:	Course for teachers

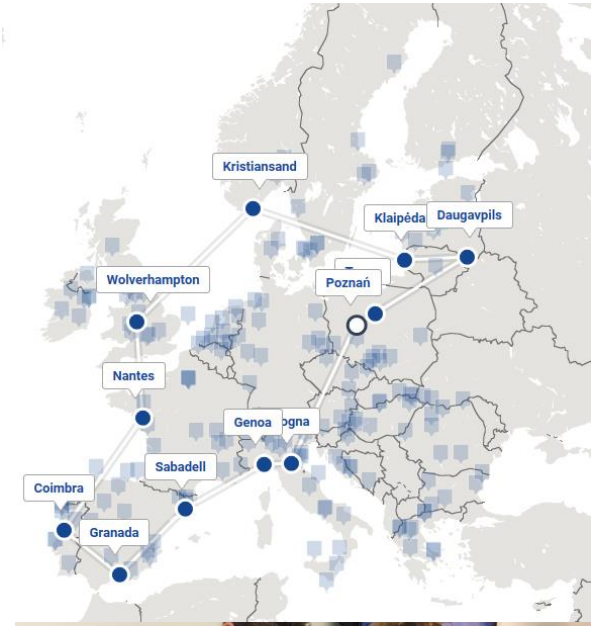
Activities	Lead Actor	Partners	Output	Timescale	Resources
Curse teachers for programming at school	Kristiansand municipality	Senter for IKT i utdanningen Tekna Lær Kidsa Koding	Several teachers who can teach coding.	Winter 2017	Kristiansand municipality

CHALLENGES:		The working life of today and the future requires people with digital and technological skills. As mentioned earlier, managing digital tools and media is considered one of five basic skills for the generation that grows up. In elementary school today, programming and coding are not part of the education, so students gain little knowledge and experience in this area through schooling. It is also a challenge to recruit girls to technological education.			
EXPECTED RESULT:		Develop and trigger girls skills in technology and science.			
ACTION:		Girl Tech Fest			
Activities	**Lead Actor**	**Partners**	**Output**	**Timescale**	**Resources**
Girl Tech Fest, 4th and 5th grade girls are invited to the library one day to learn more about programming, LEGO WeDo, 3D Printing, Mictro: Bit, and Lego Mindstorms.	The Library	Vitensenteret Sørlandet	Several girls who choose science education	8.nov	The Library

CHALLENGES:		Voluntary organizations and associations depend on volunteers who engage in different areas. Activities within a narrow segment like digital skills make it challenging to engage enough volunteers. This may be because they do not know that volunteers are needed in this area or that potential volunteers are afraid that they have insufficient knowledge in the field.			
EXPECTED RESULT:		Increase the number of volunteers who contribute in activities within the development of digital skills among children and young people.			
ACTION:		Inspiration meeting			
Activities	**Lead Actor**	**Partners**	**Output**	**Timescale**	**Resources**
Inspiration meeting	Kristiansand municipality	ULG network	More volunteers	2018	Location: City Hall Inspirational speech: Kristiansand municipality.

GENY CITY NETWORK

This project consists of 12 international project partners; Bologna (Italy), Genoa (Italy), Sabadell (Spain), Granada (Spain), Coimbra (Portugal), Nantes (France), Wolverhampton (UK), Klaipeda (Lithuania), Daugavpils (Latvia) and Torun (Poland). Poznan has had project management responsibility, and the project has had access to lead expert Jim Sims.



The project partners have attended international meetings during the project period, where they have gotten to know their host city and the activities and efforts implemented by each city. It has been inspiring, motivating and educational. The cities have focused on different areas, which has provided input and experiences in various fields. It has been useful to discuss our local challenges with partner cities with the same challenges, and get tips for possible solutions to bring back to our own cities.

Torun has worked with creative industries, and it was interesting to hear about and experience their house for creative artist and Kulturhauz as a location for different activities and a place for creative people. In Wolverhampton it was impressive and inspiring to hear how the University took responsibility for educate students and make them stay in the region after graduation. In collaboration with University of Wolverhampton and in the Science Park we visited SPARK. SPARK is an incubator and facilitates start-ups with good locations. The offer start-ups different programs and collaborate with local and national businesses in developing new companies. Wolverhampton has also appointed STEM-ambassadors who are professionals within science, technology, engineering or math. The ambassadors give lectures in schools for teachers and students, to inspire for tomorrows technologists. Jaguar and Landrover have developed a program for different classes for develop skills that are relevant for the industry. Project partners have also heard about “Wolves in Wolves” an initative with purpose to build pride and affiliation.

In Genoa, the project partners had a good session, we had a discussion about that we have to change the cognitive framework so technology, design etc. became a real alternative to football, television shows and secure jobs. In Genoa, the partners heard that local madLaB (makerspace) took

corporate responsibility and gave drop-outs an offer outside school. madLab also accepted old electronic toys and used the electronics and the different parts to make new things. It was also a citizen's initiative to clear the city's beaches and neighborhoods for garbage, and then give the plastic to madLaB that could make new things from the plastic by using 3D printing. Genoa wants also to take care of the students and provide a living city with regular events throughout the year, and not just in the summer season.

In Coimbra, the project partners heard about an impressive student project, Há Baixa or HAB. The architectural students had challenges in gaining relevant practical experience, so they started up HAB. HAB is an annual project where students join forces and find empty spaces in the city, or private homes for people they want to give a "face lift". The students use their knowledge and put them into practice through careful planning of what to do before the implementation takes place over a given period of time. The students showed us some cases with images from a studio, a small shop / office and a space in the city they had worked with. Amazing to see how students take their own self when they see the lack of practical experience in the course of study and can use it to be something constructive for the community.

In addition, at the meeting in Coimbra we heard from other international networks with almost the same theme as GenY City. InFocus, which involves smart specialization that provides, focus as a source of change. TechTown who spoke about digital economics, with software development, data management and analysis as well as marketing. Challenges and barriers as a mismatch between knowledge and need, lack of entrepreneurship culture and digital infrastructure. Their input to GenY City was that cities must facilitate access to open data, wifi access and dare to take risks.

At the project meeting in Nantes, we were overwhelmed by how much digital skills were left by the various actors we visited. From training in digital skills of young people, students or those who stands outside the labor market. The number of digital jobs in Nantes has increased in recent years, while there has been a lack of skilled labor within the field. This is something the city's actors have worked together to solve. This has led to the fact that businesses and residents have remained in the city.

Kristiansand had also the pleasure of hosting the last project meeting. At the meeting, the project partners became familiar with Kristiansand, and various organizations and activities that take place in Kristiansand, which make the city an exciting city for young people. It is interesting to host a visit like this and get feedback, comments and questions about what is being presented from our region. We start reflecting and it gives us new perspectives that in turn can provide opportunities for development. It was also motivating to get confirmation that what we are doing makes sense and hopefully yields results.