Science Alliance

Aachen's Local Action Plan

Science Alliance of Aachen

RWTH AACHEN UNIVERSITY

stadt aachen

FH AACHEN UNIVERSITY OF APPLIED SCIENCES

European Union

Connecting cities
Building successes

URBACT

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1. Starting Point – Aachen's Position in Structural Change

We are in a transition towards a society in which knowledge is the most important factor in production and competition, towards a knowledge society. (...) This process of change can be described as being just as serious as the transition from the agrarian to the industrial society in the 19th century with the then considerable shifts in the employment structure.[1]
The city of Aachen can look forward optimistically to the change towards a knowledge society. Here science is already today the most important local and economic factor. Both the citizens as well as the Aachen-based companies have agreed with this assessment for years.[2]

- In Aachen, more than 10,000 people work at the four local universities; RWTH Aachen with more than 8,000 employees is by far the largest employer in the city.
- In total, more than 48,000 people (42% of all workers with national insurance) are employed in Aachen's knowledge economy, in the areas of education & teaching, research & development, as well as knowledge-intensive production & services.
- The over 50,000 students of the Aachen universities, more than 20% of the total population, constitute one of the largest segments of the population.
- About € 330 million of public funds and private contract research funds make the universities the largest capital magnet of Aachen.

Besides such clear figures, the excellent technological expertise, innovation, and skilled labour supply that emanate from the universities, affiliated institutes, and private research institutions show the importance of science in Aachen. They have a positive effect on start-up and growth dynamics, promote permanent process

[1] Cf. Wissensbasierte Stadtentwicklung, Stifterverband für die Deutsche Wissenschaft, p. 13, 2012
[2] Cf.
a) IHK-Standortinitiative, Ergebnisse und Feststellungen aus Gesprächen mit 523 Unternehmen aus den Bereichen Industrie, Handel und Dienstleistungen, p.12, 2010
b) Aachener Bürgerdialog, Kompetenzfelder und Imagefaktoren im Ranking, p. 12, 2007

and product innovations, and thereby increase the competitiveness and employability of Aachen-based companies. All these factors add up to make Aachen the no. 1 location for science and innovation in North Rhine-Westphalia.

2. Review & Status Quo – Cooperation as Key to Success

Against this background, it was already consequential in 1996 to direct the cooperation between the city and the universities into structured paths. At this time, the city for the first time made an official cooperation agreement with RWTH through the 'eleven-point programme'. In subsequent years, new editions and cooperation agreements with FH (University of Applied Sciences) were added, and Aachen became a nationwide pioneer in city-university cooperation. In the last 18 years, many common actions, projects, and thus benefits for all parties have emerged from this collaboration in the areas of economic knowledge transfer, marketing, student care, politics, and civic knowledge transfer.

Today, however, the last conceptual advance (the cooperation agreement of 2004) lies ten year back. The collaborations are indeed diverse but heterogeneous (mostly only bilateral between two parties) and uncoordinated. In parallel with this, new challenges for the city and the university have appeared in the last several years for which the existing measures are not the right answer. Because of demographic changes and increased mobility, for example, an international competition for 'smart people' has emerged in which Aachen as a whole has to contend if it just wants to maintain the status quo of residents, professionals, students, and academics.

In view of the above-mentioned key role of science for the future site development of Aachen and against the background of increasing site competition with simultaneous scarce financial resources, the efficiency, effectiveness, and cohesion of the cooperation between city and university gain in importance.

Finally, the central question is which shared goals are pursued by the present cooperation and whether through its present form, all potentials of Aachen can be raised and the change from a scientific centre into a real city of science can succeed.

3. Challenge – From Centre for Science to City of Science

Unlike a centre for science where scientific institutions have settled more or less by chance, a city of science is influenced in all areas by knowledge and science according to the understanding of the Stifteverband für die deutsche Wissenschaft (Union of Foundations for German Science). In a city of science, knowledge has implications in all areas of life and not only shapes the self-understanding of students and scholars but also of the local economy and culture as well as of the citizens. City, science, and economy benefit from each other, cooperate regularly and in a structured manner, thus creating an innovative urban milieu.

The common goal must be to develop Aachen into a place that uses knowledge as a key location factor specifically for a knowledge-based strategy for the future. As a city of science, Aachen is to be a location of communicated and lived science and a magnet for national and international academic talent, for the best and most creative minds of science, for business, and much more. The more sustainably this strategy is pursued,

the greater are the chances of Aachen withstanding the challenge of an increasing inter-communal rivalry for economic growth.

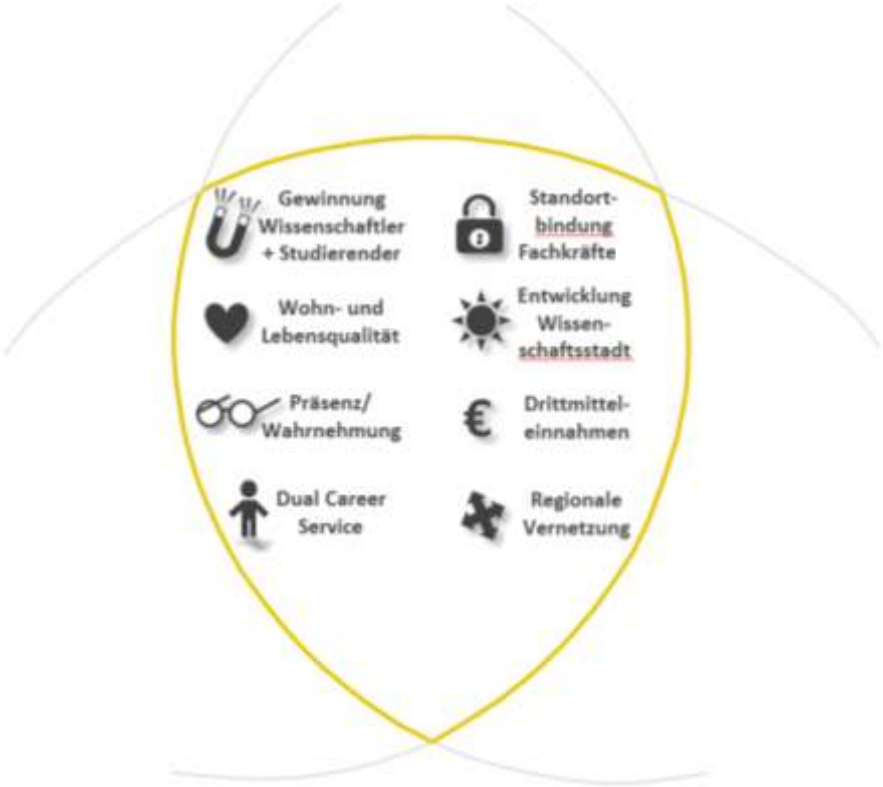
For the development of the city of science, it is not sufficient that various partners cooperate and decide bilaterally. Rather, what is decisive is a well-functioning network between industry, science, and the city (population) in which the benefits of cooperation are clearly visible to all partners. This cooperation must be carried out in a concerted, structured, and targeted way.

To manage this leap in quality and provide the necessary probing and preparations for the possible establishment of a Science Alliance (working title), a joint working group was commissioned in the top-level meeting with RWTH on 15 May 2013. Since 14 October 2013, FH Aachen has been integrated into this group.

4. Aachen's Local Support Group 'Science Alliance of Aachen' – Optimising Cooperation

In four sessions, the local support group recapitulated past performance and developed an intersection of common strategic objectives (see Fig. 1).

Fig. 1: Final intersection of common strategic objectives



Gaining
Scientists
& Students

Housing &
Quality of Life

Presence/
Perception

Dual Career
Service

Retention of
Professionals

Development
of City of Science

Third-Party
Funding

Regional
Networking

This intersection comprises altogether eight extensive goals shared by all three partners, which in turn could be grouped into five categories of objectives: I. Recruitment and Retention, II. Housing & Quality of Life, III. Presence and Perception, IV. Economic Cooperation, and V. Accessibility and Connectivity.

I. Recruitment and Retention

The common and shared goal of all partners is to bring students, scholars, and professionals to Aachen and to bind them to the city for the long term if possible. In addition to the right and targeted information, measures that support the relocation process are necessary with which, for example, the new residents of Aachen and their families are greeted and welcomed and with which a first contact to Aachen's economy and society, the cultural and leisure activities, etc. is established.

II. Housing & Quality of Life

'Only someone who feels comfortable stays', could be a short as well as logical conclusion according to which also and especially the location factors that determine life in a city should be brought into focus. They include beside the residential and town planning issues in which science should play a greater role, naturally also the issues of the sports, leisure, cultural, and gastronomic options. Although this target category appears large, some operational measures for information, events, and cooperation come into consideration with which the feel-good factor can be increased by the Science Alliance.

III. Presence and Perception

Whether a location qualifies as a working and living centre or as a business location or not depends not only on hard facts but often also on the image and the information associated with the location. Therefore, all partners share the goal of linking the location Aachen closely and automatically with the concept of science in the local, national, and international perception. Measures to achieve this goal can lie in the areas of digital media, exhibitions, and tourism as well as events.

IV. Economic Cooperation

It lies in the interests of all partners to ensure the most efficient transfer from science to the technology-oriented economy, even and especially in locally and regionally based companies. This can be carried out, for example, by greater retention of university graduates or greater spin-off help for start-ups. Both sides benefit from this as well as the business location and indirectly the labour market situation. Possible measures here are information, cooperation, and events.

V. Accessibility and Connectivity

Science is now digitally networked globally. Equally important for universities is the connecting infrastructure. Only if a city has good internal and external transportation links is it also attractive for professionals and scientists. It plays an equally important role in attracting companies and in their positive development. The connecting infrastructure of a city thus determines for the long-term the extent to which it can participate in the overall growth of the economy. Therefore, all partners share the objective of developing the transportation infrastructure of Aachen, both internally as well as externally.

The members of the working group have agreed to work together structurally in this intersection of shared strategic goals and to plan appropriate measures for implementation, especially in the aforementioned five target areas.

5. Conclusion – Catalyser 'Science Alliance of Aachen'

Science is the vaccine that can confer immunity against the increasing global competition and its negative social and environmental impacts in the 21st century.

Only those who are putting this vaccine to good use at all levels of the value chain enhance their competitiveness and can emerge as winners from the intensifying competition between locations and from the intensifying social change towards a knowledge society.

Conversely, the research facilities benefit from a location that in the external and internal perception is connected clearly with science and that proactively supports the handling of their unique challenges, such as the acquisition of students, researchers, and professionals.
The Science Alliance of Aachen as a jointly supported and controlled structure should be the link between the municipal level, the universities, and the Aachen economy. Its intention is to facilitate that all social forces strengthen science in Aachen on the one hand and that the urban society benefits from science on the other hand.

For the establishment of this new instrument of cooperation, the support of the local administration is necessary. Only with its consent can the project City of Science Aachen be triggered and sustainably implemented.

6. What to Do Next – Analysing / Structuring / Developing

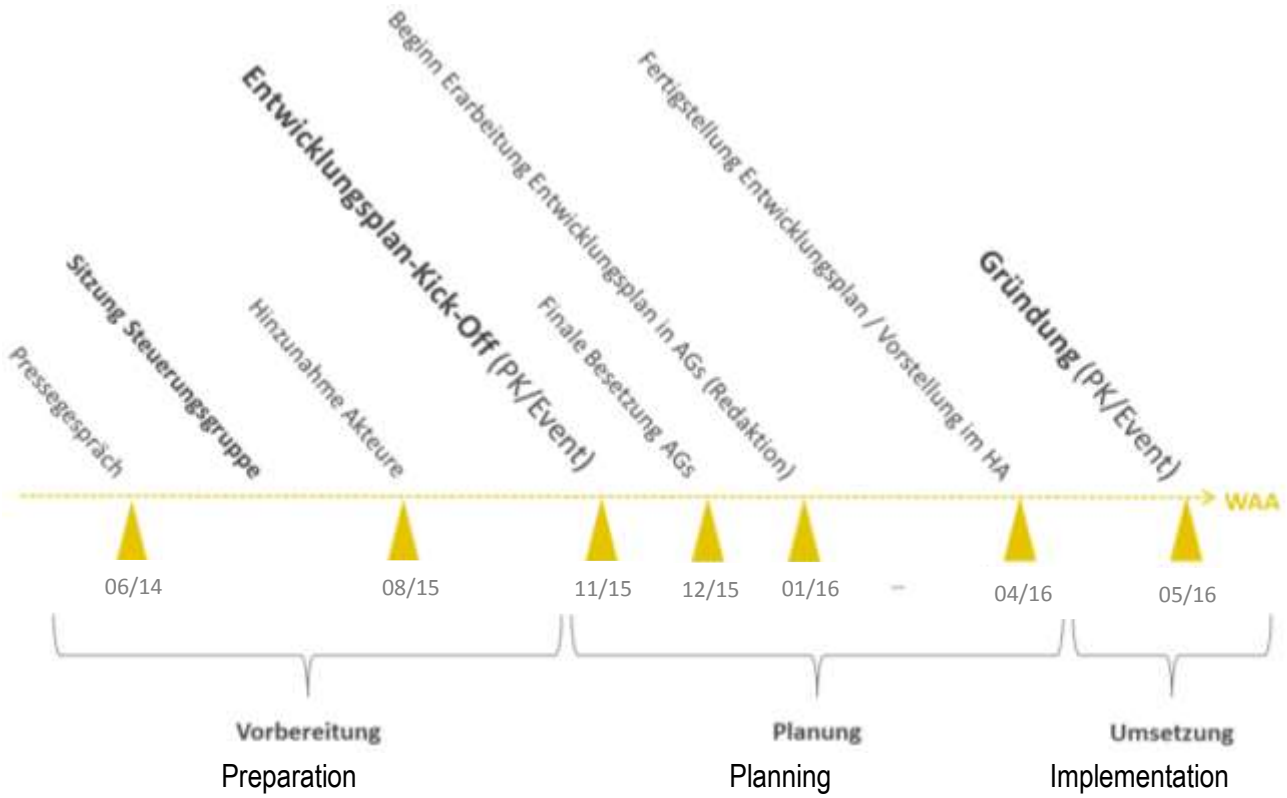
For the next steps, the integration of other players from the city, business, science, and the media is provided for in the foundational process of the Science Alliance. These players should be informed about and enlisted in

the project in a so-called kick-off meeting. Guided by the steering committee, a working group will then be formed for each of the five categories of objectives from the members of the Science Alliance. The steering group defines the membership composition of the working groups and their specific work orders. The individual working groups will be charged to draw up

- a situational analysis,
- a needs analysis, and
- to develop new measures according to the assessed needs.

Based on the results of the working groups, the steering group will work out a concrete plan of action from already successful existing measures and newly developed measures. This is to be used as a central guideline for further action in the cooperation between city and university. It is envisaged that the necessary individual measures can be started or already initiated before the final development plan is presented to the administration. Thus, a practical element is integrated into the concept that can generate significant incentives and findings for the cooperation of the partners involved.
The official foundation of Science Alliance of Aachen is to be celebrated with the completion of the action plan in 2016.

Fig. 2: Further steps to establish the Science Alliance of Aachen



Conversation with the Press

Steering Group Meeting

Addition of Players

Developmental Plan Kick-Off (Press Conference/Event)

Final Filling of Working Groups

Start Drafting Developmental Plan in Working Groups (Editing)

Completion of Developmental Plan/Presentation at HA

Foundation (Press Conference/Event)

Below in section 7, exemplary measures are listed that can give an impression of the bandwidth of a final developmental plan. These are initial ideas/approaches in the different fields that need to be developed further within the Science Alliance in accordance with the procedure described in section 6 in view of demand, sustainability, and design.

Wissenschaftsallianz Aachen

RWTH AACHEN UNIVERSITY stadt aachen FH AACHEN UNIVERSITY OF APPLIED SCIENCES

7. Appendix – Exemplary Measures/Ideas

The exemplary measures are associated with the aforementioned five target categories (see section 4).

1. Recruitment and Retention

Student Visits to Companies:

Regular visits of the Aachen students, especially of the so-called MINT subjects (mathematics, informatics, natural sciences, and technology), to local and regional companies should be intensified in cooperation between the city, FH, RWTH, and for example, IHK or HWK. In this case, the existing 'information knot' between supply (Aachen-based companies) and demand (Aachen students) should be loosened. Currently in Aachen, the students have still too little awareness about career prospects and opportunities. The company visits might constitute an additional tool to increase bonding effects.

International School:

The field of science is becoming increasingly internationalised. This means that especially RWTH attains its research achievements more and more with the help of hired foreign researchers. However, since contracts are often limited in time in this context, it makes no sense, for example, to integrate the children who have moved to Germany with their parents into a German school. From the perspective of top foreign researchers, therefore, the existence of an international

school plays a significant role when they weigh the decision for or against the location of Aachen.

2. Housing & Quality of Life

Campus Festival:

With the campus festival, an annual musical event is to be established on the grounds of the Melaten campus. The conceptual content is aimed at the young residents of Aachen (18 to 40 years). Advantages of such an event format in Aachen would be many. One would in this way use the new campus for other than its actual intended purpose and thus bring it closer to the rest of the urban space and its inhabitants. On the other hand, its remoteness and the natural screening by existing institute buildings would be ideal conditions for a larger open-air event, for which a high demand would be guaranteed alone by the more than 50,000 students.

GIS Map:

Development of a map based on a georeferenced information system that can generate specific topical map views of Aachen. Conceivable here, for example, would be the presentation of a club & pubs map organised with filters, which would display all pubs & bars in Aachen, for example. Thus, the actual offerings in this area would always be displayed. Another example could be the cartographic representation of all bus stops in Aachen. Such an offer could be extended to many other topical maps. Such a map-based information system would offer a great help especially to the initial orientation of new residents of Aachen.

3. Presence and Perception

‘Made in Aachen’ Campaign:

The city of Aachen is a technology hub and is characterised by a high density of research. New discoveries, developments, and patent applications come regularly from academic and private research. Many already established inventions and patents have also come from Aachen, however. Nevertheless, this high innovation density is not properly perceived by the public. The aim of the campaign 'Made in Aachen' is to change this. The campaign 'Made in Aachen' includes different publicity measures: to spread inventions through social media tools, poster campaigns for local businesses and their innovations, etc.

Joint Marketing for Students:

In addition to the teaching quality of their future college, what is important for young people for the choice of their future study location is its quality of life. High-quality internet marketing can achieve great things by ideally positively strengthening an existing first impression or association or by converting it from negative to positive. Conceivable here is, for example, a homepage designed for young

people. This would be fundamentally distinguished by an age-appropriate (18 - 25 years) design and active handling. A picture is worth a thousand words. True to this saying, so-called 'Aachen Street Videos', for example, would be extremely meaningful in the promotion of Aachen as a place to live for future students and professionals. Online, one could offer theme-related video tours through Aachen from the viewpoint of the pedestrian.

4. Economic Cooperation

Tandem Consultations: Technology transfer plays a crucial role in the economic innovativeness of today's enterprises. The companies on their part, however, often lack the knowledge of how to establish contact to higher educational institutions, while the technology transfer offices of universities also know only some of the local businesses. At this point, a bundling of the organisational knowledge on the side of the city and the substantive knowledge on the side of the university makes sense. Through so-called tandem visits (city and technology transfer offices), companies can be approached in a targeted way and an effective knowledge transfer can occur.

5. Accessibility and Connectivity

Campus Connection: The medium to long-term connection of the new campus areas to the downtown area makes a lot of sense both from the perspective of the city and of RWTH. On the one hand, the quick accessibility of all RWTH campus areas is of exceptional importance for a smooth flow of the students' learning process, on the other hand, the current congestion of the public transport network, for example, has a negative impact on its usability for other citizens. In addition, an embedding of the Melaten campus into the city as a whole can only succeed if everyone can reach it quickly and easily from the city centre.

1 Recruitment & Retention	Student Visits to Companies		International School
2 Housing & Quality of Life		Campus Festival	GIS Map
3 Presence & Perception		‘Made in Aachen’ Campaign	Joint Marketing for Students
4 Economic Cooperation	Tandem Consultations		
5 Accessibility & Connectivity			Campus Connection
	Short-term	Medium-term	Long-term

Fig. 3: Exemplary Measures in a Time Frame