JOINT INNOVATION STRATEGY
of the States Berlin and Brandenburg (innoBB)

THE GERMAN CAPITAL REGION
EXCELLENCE IN INNOVATION
JOINT INNOVATION STRATEGY
of the States of Berlin and Brandenburg (innoBB)

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# CONTENTS

1. Preamble ................................................................................................................ 3

2. Guidelines for the Joint Innovation Strategy of the States of Berlin and Brandenburg .................................................................................................. 4

3. Cluster development based on joint future fields of excellence ............... 6
   3.1 Advantages of cluster development................................................................. 6
   3.2 Innovation potentials in the capital region ..................................................... 7
      3.2.1 From future field of excellence to cluster................................................. 7
      3.2.2 Cross-cutting themes .............................................................................. 13
   3.3 The further development process ................................................................. 16

4. Political planning framework ................................................................................. 18

5. Management model and structures................................................................. 19
   5.1 Organizational platform for implementation management ................. 19
   5.2 Management structures within the cluster development........................ 20
1. PREAMBLE

Given its excellent science and research facilities and the broad range of business-oriented research and development, the capital region holds a top position in Germany’s and Europe’s innovation landscape. This position is to be further consolidated in future.

The development of a joint innovation strategy for both States is an ongoing process initiated as early as 2007 at an innovation summit meeting, and further developed at subsequent annual innovation summits. The events were accompanied by a mutual accommodation of all parties involved in the region’s future-oriented sectors. This dynamic process is given further impetus with the elaboration of a joint innovation strategy.

The innovative core of the nascent cluster structures is focused in a joint strategy and underpinned with a growth- and competition-oriented basis by innovation policy instruments.

The Joint Innovation Strategy of the States of Berlin and Brandenburg (innoBB) ties in with/continues on from:

- The innovation policy cooperation of both States, and is based on the current strategies, i.e. Berlin’s „Coherent innovation strategy“ and the „Land Brandenburg innovation concept (LIK) 2006,
- the results of the 2008, 2009 and 2010 innovation summits, and
- the current financing and transfer agreements.

The rapidly changing conditions in the international markets present new challenges for the innovation policy of both states.

These conditions amongst others include the challenges entailed by climate change, but also increasing requirements for ensuring the permanent availability of natural resources. Resource-efficient, nature-compatible and sustainable economic management is therefore of particular importance for securing growth, prosperity and international competitiveness in the States of Berlin and Brandenburg. The concrete design of the cluster development will be specifically aligned with this. In this sense the joint innovation strategy with its main objective of securing the capital region’s international competitiveness also falls in line with the “Europe 2020 Strategy” as the States' specific contribution to intelligent, sustainable and integrative growth.
2. GUIDELINES FOR THE JOINT INNOVATION STRATEGY OF THE STATES OF BERLIN AND BRANDENBURG

The Joint Innovation Strategy of the States of Berlin and Brandenburg (innoBB) specifies objectives and framework conditions for an active and successful formulation of the innovation policy of both states, in order to make efficient use of the innovation potentials and synergies within the overall region over the coming years.

- **Securing the capital region’s capacity for innovation**

A joint target system requires a further development of the innovation policy cooperation, and more precise specifications in view of market changes, technological developments, and new industry requirements within the capital region.

- **Placing the dialogue between science and industry at the centre**

The capital region’s higher education and science landscape is varied and unique. A close dialogue between science and industry promotes the dynamics of innovation and activates the existing research and development potentials by way of corresponding transfer approaches and collaborative projects.

- **Focusing the location’s profile by grouping subject-related competences**

The location’s profile is brought into sharper focus by concentrating the innovation policy in closely dovetailed, growth-oriented future fields of excellence as the core of target-oriented cluster development, while taking cross-cutting themes into account. The contents and resources of both states are strategically grouped and integrated in the process.

- **Ensuring international competitiveness**

The capital region successfully competes with leading international metropolitan regions. With its clear orientation towards international competitiveness and international research collaborations, the innovation strategy ensures that the region can also reinforce its position in a competitive environment that continues to intensify, and will be able to absorb EU stimuli more quickly.
5. Picking up on regional strengths in a targeted manner

6. Sustainability as a yardstick for innovation policy

7. Joint coordination structures safeguarded for the long term

8. Cross-departmental and cross-border networking of relevant policy areas

9. Making success stories auditable and communicating them

- **Addressing region- and location-specific characteristics within the capital region**

  The industrial and structural baseline and framework conditions as well as the regional strengths in both states are deliberately addressed within the framework provided by the innovation strategy, and the innovation policy instruments are attuned to this.

- **Prioritizing sustainable innovations**

  The challenge of pursuing a future-oriented location policy also includes a stronger focus on sustainable innovations in the respective clusters/future fields of excellence.

- **Creating permanent structures**

  The required coordination between existing future fields of excellence and/or emerging clusters within permanent structures is only possible with strategic foresight. A sustainable innovation strategy hence calls for assured joint control structures, irrespective of project and assistance periods.

- **Inclusion of relevant resources**

  An efficient innovation policy for both states that is targeted at long-term conformity with the objectives necessitates exchange and coordination. The acquisition of cross-regional and international financing for implementing the innovation strategy gains in importance in this respect.

- **Ensuring transparency and performance assessment**

  Only a reproducible and communicable innovation strategy can ensure acceptance. For this reason the further planning will be accompanied by quantified targets, project success control measures, and the public reporting of results.
## 3. CLUSTER DEVELOPMENT BASED ON JOINT FUTURE FIELDS OF EXCELLENCE

### 3.1 Advantages of cluster development

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Critical mass</td>
<td>To function a cluster requires a critical number of companies and science facilities to be located in close proximity geographically, and that they cooperate with one another.</td>
</tr>
<tr>
<td>Joint interests</td>
<td>Clusters concentrate companies and institutions with common interests within the region. These actors are linked by their activity in a branch of industry, connections in the value creation chain, or by the use of identical or similar technologies.</td>
</tr>
<tr>
<td>Dynamic growth</td>
<td>A cluster needs to feature better than average and dynamic growth perspectives, for example by virtue of its innovative strength or because of specific unique selling propositions and competitive advantages.</td>
</tr>
<tr>
<td>International dimension</td>
<td>The dimensioning of the clusters are determined by their strategic and visible orientation towards cross-regional and international growth markets.</td>
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### Cluster benefits:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Description</th>
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<tbody>
<tr>
<td>Expanded cooperation environment</td>
<td>Within a larger group the cooperation environment of the companies can be amplified along the value creation chains in a targeted manner, and possible gaps can be closed. The improved opportunities for system offers serve to enhance the competitive position of the cluster partners.</td>
</tr>
<tr>
<td>Better resource deployment</td>
<td>Small and medium-sized companies, in particular, can put their resources to optimal use by taking part in a cluster, benefit from an improved division of labour or supply situation within a cluster, and are hence able to focus on their respective core competences.</td>
</tr>
<tr>
<td>International market development/penetration</td>
<td>The competence and reach of a cluster is systematically expanded in parallel to its growth process. Clusters can therefore enable companies to open up new markets and achieve international visibility more quickly.</td>
</tr>
<tr>
<td>New quality of joint projects</td>
<td>Regional commonalities such as the locally available personnel and their qualifications or the science and transfer offers available create improved conditions for joint projects that will also hold their own in an international competition.</td>
</tr>
</tbody>
</table>
A professional management will ultimately ensure that the cooperation and project structures within a cluster are expanded strategically, while supporting the development and coordination of joint and assisted cross-border projects.

Clusters have specific characteristics and functions in keeping with the respective industrial and structural framework conditions of the region in question. In addition to this, their development process can also range across various „stages of maturity“, depending on the structure of the actors and the extent of their cooperation.

3.2 Innovation potentials in the capital region

3.2.1 From future field of excellence to cluster

The future fields of excellence provide the innovative and growth-oriented cores of the future cluster structures. They play a key role for the capital region’s innovation processes.

Fig. 1: Lasting development of future fields of excellence into high-performance clusters

The objective consists in focusing the existing structures, networks and potentials within the clusters, in line with the principle of „strengthening strengths“ and in terms of greater reach, as well as in a manner that is oriented towards value creation. This will lead to the definition of powerful clusters/future fields of excellence which are also able to compete in the international innovation race.

Cross-border funding strategies on a federal (e.g. the top cluster competition held by the Federal Ministry of Education and Research BMBF) or EU level have furthermore shown that the success of innovation networks under competitive conditions definitely does depend on them reaching a „critical mass“, and on a joint marketable core.
Future fields of excellence enhance the self-reliance and leeway of the actors

The future field of excellence “Biotechnology, medical engineering and pharmaceuticals” is developed into the „Healthcare industry“ cluster

Focusing the future innoBB on joint clusters/future fields of excellence will enhance the self-reliance and content-related room for manoeuvre of the respective actors. Given their newly won strength and the corresponding management, the sectors will be able to set their own innovation processes in motion and hence also to execute projects on a larger scale.

Healthcare

The „Biotechnology, medical engineering and pharmaceuticals“ future field of excellence has been continuously developed ever since the first biotechnology and medical engineering master plans were passed. The areas of activity include innovative biotechnologies, diagnostics/bioanalytics, drug development, regenerative medicine/biomedical materials, prevention/diet/food, regrowable resources, telemedicine, imaging, minimally invasive surgery, and implants/orthopaedic technology. But the sector also includes the topics of white and green biotechnology. Traditional and young businesses in the biotechnology, medical engineering and pharmaceutical industries form the innovative core of a „healthcare industry“ cluster which also includes health-related services.

350,000 people work in the health industry in Berlin and Brandenburg, which is more than one in eight of the region’s gainfully employed. The health industry therewith makes a significant contribution to employment and growth – greater than in most other regions. The offers in the region range from basic care to high-end medicine, from prevention to highly specialized rehabilitation.

Against this background and including the future field of excellence „Biotechnology, medical engineering and pharmaceuticals“, a joint cluster management was established in July 2010 for the further implementation of the „Health region Berlin-Brandenburg“ master plan passed in 2007. The cluster management for the health industry cluster will in future be drawn from within this future field of excellence, using the resources of the technology foundation TSB (BioTOP Berlin-Brandenburg, TSBmedici, GRW Netzwerk Gesundheitswirtschaft Berlin-Brandenburg) and human resources from the life science teams of Berlin Partner and ZAB, hence achieving enhanced cross-border cooperation.

The central task in particular consists of the implementation of the „Health region Berlin-Brandenburg“ master plan with concrete projects and measures, improved framework conditions and infrastructures. The States will for example contribute to the further development and practically oriented application of telemedicine. The improvement of GP services by telemedical processes and stronger networking of specialist competences via telemedicine are two focus areas in Brandenburg, especially with a view to securing health care provision in rural regions.
Further focus areas for both states are provided by technology transfer and the expansion of the cluster’s industrial base. The expansion of the cluster is to create new jobs by way of the continuous further development of the innovative core, such as, for example, medical imaging, generative medicine and diagnostics, besides other areas, as well as by locating companies locally and the formation of centres and networking.

- **Power engineering**

With approximately 47,000 jobs, power engineering is of great economic and scientific importance to both the states of Berlin and Brandenburg. The capital region holds a leading position within Germany in research and development, but primarily also in the production and application of environment-friendly energy and cutting-edge energy efficiency technologies. It has furthermore seen dynamic development in the photovoltaic sector. Besides important manufacturers in both States, a top research network is also located here in the form of PVcomB. Brandenburg has not only been honoured with the „Leitstern“ (Guiding Star) award as the „Best federal state for renewable energy“ in 2008 and 2010, but is currently also witnessing the construction of the world’s largest solar power station, the world’s largest biogas facility, and the largest onshore wind power stations. Brandenburg is no. 1 nationwide in the production of biofuels and no. 2 for installed wind power. In Berlin, energy efficiency in the building sector is outstandingly positioned in a nationwide comparison. Future-oriented power engineering topics such as energy storage have also been actively taken up in the capital region.

Market-dominating international companies have sent a signal to the capital region with extensive investments in their production facilities. But young, high-growth Berlin and Brandenburg companies in the renewable energy sector have also been able to establish themselves in the national and international markets. A large part of the value creation in the capital region is furthermore provided by traditional power engineering products such as gas turbines, substations and converters. Numerous science facilities are engaged in energy-related research and teaching.

With the establishment of the „power engineering“ future field of excellence as part of their innovation policy cooperation, the States of Berlin and Brandenburg have started to combine their resources and competences, as well as the joint advancement of regional innovation potentials within this industry. The joint „power engineering“ future field of excellence strategy has meanwhile included an agreement on five action areas of particular relevance for both states since as early as 2008.

The last two years have already seen impressive success stories in this future field of excellence, which were presented at the annual innovation summits. The development of the future field strategy into a cluster strategy represents a decisive milestone in cross-border cooperation.
Networked transport systems characterize the mobility region Berlin-Brandenburg

The capital’s airport as a growth driver

The first future field of excellence dialogue, where the industry players discussed and agreed to the development of the future field of excellence into a cluster, has taken place in October 2010. This discussion also led to an agreement on more precise specifications for the following fields of action: solar energy, turbomachinery and power plant technology, energy networks and stores/e-mobility, energy efficiency technologies, and wind power/bioenergy.

### Transport, mobility and logistics

Transport, mobility and logistics are decisive growth and employment factors for the region with approximately 158,000 jobs in manufacturing companies, large operators, logistics service providers, and science facilities. The efficient provision of mobility will in future no longer be possible via a single carrier or one specific technology. The efforts must hence be focused on increasing the effectiveness of the overall system.

Against this background the cluster development entails a further strategic merging of competences and the building up of cross-border synergies in the interrelated fields of action of road traffic/automotive, rail technology, traffic telematics, aviation and space flight, as well as logistics.

All these areas are represented in the capital region in the form of renowned manufacturers, service providers, and a broad range of science and research facilities. The companies meanwhile benefit from the high quality of the location, with good traffic connections and close proximity to central and eastern European markets. The realization of the new airport will also serve to further improve the accessibility of the capital region.

The development and operation of the airport will furthermore provide additional innovation stimuli for the involved science facilities and companies in the airport technology, air traffic and logistics industries. In terms of engine technology the capital region has already grown into a leading aviation technology centre with well-known manufacturers.

But also in rail technology the capital region traditionally offers high competence along the entire value creation chain and therewith already belongs to the internationally leading railroad engineering regions today. Two of the three large European system manufacturers are based here so far.

The logistics industry has meanwhile also shown dynamic development in the capital region, on the one hand by the establishment of new freight traffic centres with intermodal solutions, and on the other by the increasing application of telematic and optical technologies, as well as satellite navigation. Further growth stimuli are aimed for by positioning the region as a seaport backup area location.
Traffic telematics highlights the strengths of the region as the „capital of intermodal transport” to particular advantage – linked with claims to the most modern traffic management in Europe.

Another important innovation driver of the cluster is the current impact on the environment and climate, which calls for modern engines, more efficient technologies and alternative fuels, most of all in the action area of road traffic/automotive. In this respect electromobility provides a focus area for projects and measures, because replacing the drive system also leads to a paradigmatic change in the industry, besides the mobility and traffic situation.

**ICT/Media/Creative Industry**

The information and communication industries play a key role for the innovation processes in the capital region, as is the case with the media and creative industries. The spectrum within this future field of excellence with over 91,000 jobs ranges from international companies in the television and film industry, multimedia businesses, the creative sector, the publishing and press market, media services, infrastructure providers and e-businesses through to data processing and telecommunication technologies, software development, IT system suppliers and consumer electronics.

Central sectors such as the providers of software services and producers of digital games and content have become less dependent on their location thanks to the global accessibility of the internet. But the capital region has nonetheless managed to enhance its attractiveness in this situation by the great variety and extensive networking of the actors, its creative potential and image, as well as optimal framework conditions. This is also attested to by the second place behind Munich in a nationwide comparison.

Current focus areas of competence in both states, which could be defined as joint fields of action within the continuing cluster development process, include security and IT, digital media, mobile applications (including RFID and NFC), and the „Internet of Services” and „Connected Living” initiatives.

Further fields of action such as, for example, the geoinformation/visualization industry, telecommunication networks and services or some e-processing sectors are developed in line with the respective state’s givens and in close mutual coordination.

The variety of competences in the ICT/media sector harbours significant overlaps with other clusters/fields of future excellence, such as in the areas of security and IT, or that of IT-solutions in the health industry (e-health). The developments in the ICT industry frequently even serve as initial forerunners for innovations in other clusters/fields of future excellence. In a particular in the increasingly digitalized media industry, companies have more and more come to depend on ICT innovations. For the games and media industries, the processing and refinement of geodata has meanwhile brought about significant synergy potentials with the geoinformation industry.
The framework conditions for establishing or locating new innovative businesses here are particularly favourable against this background. Many cross-border measures, networks and individual pilot projects have at the same time already come to characterize the industry’s innovative power today. The capital region is in addition to this also involved in a large number of European projects.

The extensive synergies between the IT, media and creative industries require an increasingly pronounced interface management within the cross-border cluster.

- Optics

In Berlin and Brandenburg the „optics“ future field of excellence, across the entire value creation range and various application areas, involves over 16,000 jobs in optical technology and the closely related microsystem technology. Contained therein are the optical and micro system science and research potentials within the capital region which, in this density and variety, hold a distinguished position nationwide. The central cross-border network of this future field of excellence is OpTecBB.

The region’s companies and research facilities represent a broad range of different subdisciplines within the key technologies of optics/photonics, and are engaged in realizing a variety of microsystem and optoelectronic products and applications. The product range runs from classic optics and ophthalmic optics via the mass production of light sources and lamp manufacturing, the production of lasers and LEDs, sophisticated metrology for the whole range of the optics spectrum, through to components and systems for optical communication networks.

Along these competences the action areas of laser technology, photonic components and optical communication technology, light technology, process measurement technology and analysis, and microsystem technology have been identified as part of the future field of excellence strategy. Further fields of action with potentials for the future include terahertz technology, optical sensor technology and image processing, biomedical optics/medical engineering, system integration, agricultural and food technology, as well as wide band gap semiconductors (WideBaSe).

Given their cross-cutting nature, optical technologies and microsystem engineering also enable a variety of application areas in the capital region’s other clusters/future fields of excellence. Optical technologies, photonics, spectroscopy and microsystem technology are for example being applied and developed as tools or analytical processes in the areas of power engineering, medicine, the biosciences, communication technology and transportation systems. Materials with special optical features are at the same time the subject of intensive research (e.g. semiconductor crystals, photovoltaics, organic optoelectronics, etc.) in the areas of materials research which are specialized in this respect, and serve as significant wellsprings of innovation for application industries such as solar energy, for example.
The development of this future field of excellence into a cluster with cross-cutting orientation is planned in the longer perspective, in order to further close the value chains, enhance the international competitiveness of the companies, and expand the range of applications for these key technologies within the capital region’s clusters.

### 3.2.2 Cross-cutting themes

The stronger the economic environment they are anchored in, the more successful will cluster initiatives be. In this sense the capabilities of the involved companies are also influenced via so-called growth-relevant “cross-cutting themes”.

- Cross-cutting themes are cross-industry and –sector technologies and processes which provide the required innovation sources for several clusters/future fields of excellence, and support them in a value-creating manner. They indirectly lead to product and process innovations in the respective application industries, i.e. are only turned into market-ready services and products in the context of the respective cluster potential.

- Cross-cutting themes contribute to the utilization of dormant networking and synergy potentials within the clusters/future fields of excellence and therewith improve the productivity of the involved businesses, which are supplied with better opportunities for cross-industry and cross–technology networking.

- Cross-cutting themes are acceleration factors and growth drivers within the clusters/future fields of excellence. They engender support for the formation of innovations and for the dynamics in the applying industries, and therewith significantly contribute to value creation.

- Cross-cutting themes feed future technologies and market trends into the clusters/future fields of excellence and contribute to the gestation of new, promising lines of development. In doing so they support the forward-looking orientation and competitiveness of the clusters/future fields of excellence.
The definition of the cross-cutting themes is anything but conclusive. They offer an opportunity for adjustment and amendment with respect to current market and structural changes.

The following cross-cutting themes engendering significant contributions to the value creation in individual clusters/future fields of excellence are currently of particular relevance for the capital region:

- Materials
- Production and automation technology
- Clean technologies
- Security

The cross-cutting themes in detail:

- **Materials**

„Materials“ includes all relevant cross-cutting industries with a direct impact on the growth of several clusters/future fields of excellence as application industries. They provide a link to the local industries, most of all in the areas of plastics/chemistry, metal/electro and regrowable resources, which is vital for Berlin and Brandenburg. It is in these areas where the basic technologies which are indispensable for all clusters/future fields of excellence are primarily domiciled. The region’s industries possess grown potentials in these areas, but also exert a significant influence on future-oriented themes themselves, for example in the areas of new materials, light-weight construction materials, and energy efficiency. In the field of tension between cost effectiveness and sustainability the industrial landscape hence takes its cues from the same challenges as the future clusters. The synergies at the interface between industrial and innovation policy can be optimally portrayed with this dovetailing.
Production and automation technology

As a technology sector, the cross-cutting theme of „production and automation technology“ is also highly relevant for the innovative capacities and speed of innovation within the clusters/future fields of excellence. Only intelligent production processes and innovative automation solutions can enable the required optimization of nearly all processes in the research and development labs, and in manufacturing. The production and automation technology sector therewith greatly helps to reduce the time, expenses and energy, and hence contributes to the quality assurance and competitiveness of individual innovation processes. The interplay of technical, organizational and business aspects is of essential importance in this respect. The capital region traditionally features a broad range of business, research and education competences in many areas such as production engineering, electronics/telematics, measurement/control technology and sensor technology, but also in process control areas such as production logistics, and hence offers an excellent basis for accompanying the innovation processes within the clusters/future fields of excellence.

Clean technologies

Another cross-cutting theme with extensive future potentials can be subsumed under the term of „clean technologies“. These include all technological developments which are focused on the topic of „sustainability“, in particular in the area of environment- and climate-friendliness (and/or –neutrality), and which actively address the challenges of climate change. Most of all the sectors of „renewable energy“ and „technologies for reducing CO2-emissions“ can hence be regarded as growth drivers for the future fields of excellence „energy technology“ and „transportation systems“. Bio-economy is also increasingly gaining in importance in this context.

But in an era of globally reacting ecosystems all other innovation fields will be decisively influenced by the philosophy of „clean technologies“, as the cross-industry challenge of sustainably combining technological developments with comprehensive climate protection continues to apply. The capital region is already one of Germany’s leading clean tech regions today with the sectors solar technology, wind power, clean coal, and energy from renewable resources.
Another key role as a cross-industry topic and accompanying market requirement is played by the ever more important cross-cutting theme of „security“, whose impact on the companies’ innovation activity in virtually all clusters/future fields of excellence should not be underestimated.

As a subject, „security“ covers various facets within the areas of „security“ and „safety“. Superficially many companies primarily regard the threat to IT infrastructures as an innovation risk that needs to be taken seriously. But the safety/security of products and processes has in parallel also become an economic factor of global importance. The piracy of brands, products and technology causes many companies significant economic damage, as well as an undesirable draining away of competition-relevant knowledge. The protection of innovations and know-how hence needs to become a declared element of any innovation strategy.

But the topic of security is at the same time also an innovation driver for the capital region, and has been recognized as a focus area of cross-border economic policy for quite some time within the IT sector. The fields of action and measures are described in the joint master plan „Security industry and research Berlin-Brandenburg“. Topics such as road safety and airport security, electronic ID such as the e-passport, or security management already have great application potentials within the region and, given their service-orientation, partly also regarding the employment situation. This cross-cutting theme should be further developed for all relevant clusters and future fields of excellence.

3.3 The further development process

The further development process will need to address the various stages of the cluster structures already being created and is insofar designed individually.

The focus in this respect lies on highly participative approaches for involving the actors in the clusters and/or future fields of excellence across all sectors.

Additionally required is the elaboration and/or updating of master plans for clusters/future fields of excellence, complete with the interfaces to the cross-cutting themes. The master plans include:

- Unambiguous and measurable strategic development targets for each cluster/future field of excellence, including a strategy in the sense of a clear definition of potentials, as well as of action areas for their implementation,

- individual pilot projects which are attuned to this and prioritized in the implementation.
This process is a continuous task, with a gradual concretization of the work and development phases.

The time schedules for the cluster development processes need to be elaborated individually. The following illustration shows the process sequence by way of example:

![Figure 3: Schedule of the further development]

The pilot projects to be developed need to meet special requirements in order to be able to make an effective contribution to the cluster development and be prioritized as part of the innovation funding:

- Cross-border project approach,
- Involvement of industry and science,
- Market acceptance and visibility,
- Cross-regional and/or national importance,
- High likelihood of realization and application-orientation for the region,
- Assured financing (adequate own contribution / industrial support).

Already existing project approaches extending beyond 2010 have been reviewed again regarding these requirements as part of the cluster/future field of excellence dialogues.
4. POLITICAL PLANNING FRAMEWORK

Besides the joint clusters/future fields of excellence and cross-cutting themes, the future economic development of the States of Berlin and Brandenburg will also be shaped by the political planning framework, which has a cross-industry and cross-sector impact on the companies’ capacity for innovation.

- Harmonization of innovation and technology funding

If the promotion of joint projects is to be improved, the provision of attuned/coordinated innovation promotion instruments is an essential requirement for the realization of innovations, and hence exerts a direct influence on the innovation dynamics of the capital region.

To be realized in addition to this is a joint financing of the clusters’ cross-border management structures as part of the EU’s regional structural support programme in compliance with the Commission’s instructions.

The joint application for funding from federal and EU programmes will be given greater weight. In particular the clusters/future fields of excellence will need to play their part in this. The activities are accompanied by regional financing modules, if required.

- Maintenance and expansion of the innovation infrastructure

The importance of the research and development infrastructure is undisputed. The capital region’s science and research infrastructure has the greatest density in nationwide comparison and is also able to compete internationally. All research organizations and foundations are represented in the region. Science and technology parks (including start-up centres) complete the available facilities at selected locations.

The following are earmarked as future strategic aspects in the further development of the research infrastructure:

- Provision of internationally competitive infrastructure in higher education and extramural research facilities,
- early coupling of science and research with corresponding user knowledge,
- stronger stimulation of contract research from the corporate sector,
- better coordination between Berlin and Brandenburg in the establishment of new structures regarding infrastructural funding and promotion offers,
- targeted expansion and financing of R&D infrastructures in the private sector itself.

Further policy planning options in the areas of transfer, international networking and marketing are directly brought to bear on the cluster development processes via the organizational implementation management platform for innoBB (see 5), which maintains direct links to the political decision-makers in both states.
5. MANAGEMENT MODEL AND STRUCTURES

5.1 Organizational platform for implementation management

The expansion of clusters, development of future fields of excellence and advancement of cross-cutting themes calls for the creation of efficient and organizational structures which are designed for permanence. The illustration below shows the organizational structure:

Innovation summit of the States of Berlin and Brandenburg

Steering group
of the undersecretaries of the science and economics departments of the States of Berlin and Brandenburg

Cluster/future field of excellence structures
including all parties involved from science and industry

Clusters/Future fields of excellence

Fig. 4: Management model for implementing the joint innovation strategy

Only institutionally anchored structures ensure sustainable innovation policy success

1 Involvement of further parties from other areas such as the health industry, for example, on a case-by-case basis
5.2 Management structures within the cluster development

Sustainable cluster development is ensured by management structures which are tied to an expert and institutionally assured facility.

The cluster managements carry the responsibility for the cluster strategies. A strategy advisory board accompanies the further development of the clusters.

The further advancement of the clusters also maintains its clear orientation towards innovation within an expanded range of tasks. Within this catalogue the management of the clusters/future fields of excellence is allocated new, innovation-promoting tasks that were previously met in a state-specific manner.

The central task areas of the cluster/future field of excellence structures to be and the respectively coordinating institutions in particular include:

- **Strategy / Innovation profile**
  - Development of a growth path and profile for the cluster/future field of excellence as part of a medium- to long-term cluster/future field of excellence strategy (master plan), and consensus formation in this respect towards the inside and outside,
  - coordination and mutual reconciliation of the areas of action regarding the strategic activities of the networks and parties of the cluster/future field of excellence, exchange of experience regarding the strategic orientation and further development,
  - selection and development – but also initiation – of (in particular also international) pilot projects of great importance for the entire cluster/future field of excellence, if required also cross-cutting, in close contact with the companies and research facilities.

- **Acceleration of the knowledge and technology transfer including innovative start-ups and „transfer via heads“**
  - Themes which range across clusters/future fields of excellence are:
    - Consistent conflation and advancement of the knowledge and technology transfer system. This is aimed at establishing a closer connection between industry and science while making use of the density of research facilities, which is unique in Europe.
    - Further development of incentive mechanisms for entering into collaborations between industry and science, as well as for the success and quality control regarding the entire system. These themes are systematically taken up in a cross-border manner and coordinated and reconciled in a cross-industry and cross-departmental manner.
• In their periphery the clusters/future fields of excellence feature an above average quota of innovative start-ups. Cross-theme and cross-location support is being provided, as well as coordination in the creation of start-up networks, the expansion of corresponding higher education offers, and the securing of the corresponding funding, in order to continue this development.

• Another aspect of the knowledge transfer is the „transfer via heads“, which needs to be achieved as part of a targeted effort to secure skilled labour. The challenges of meeting the region’s future demand of skilled labour are significantly exacerbated overall by the demographic development. Securing skilled labour over the medium to long term is hence a strategic topic in the economic and hence also innovation policy. The joint Berlin-Brandenburg skilled labour study provides a detailed forecast of the capital region’s future demand for skilled labour. The study’s analysis and recommendations for action need to be evaluated, insofar as specific analyses are not as yet provided, and targeted measures developed within the clusters/future fields. A prioritized task for the region’s nascent clusters in this respect resides in keeping trained and skilled academics at the location, presenting the capital region as an attractive place of work, and promoting further education offers in a targeted manner.

International networking

• Supporting the private and science sector of the capital region in the enhancement of their competitiveness internationally is a central objective of the innovation strategy. For this reason all the activities take their orientation from international growth markets, technological developments and cooperation options.

• The companies and research facilities of the capital region already entertain a multitude of international contacts and cooperation relationships today. Building on this, the future clusters will develop systematic network relationships and strategic partnerships with other actors from Europe and beyond. An important tool for this is the involvement of international partners in cluster projects.

• The funding of research and innovation via direct EU programmes will gain in importance for Berlin and Brandenburg. The planning of measures within the clusters/future fields of excellence is for this reason aligned with EU priorities and financing options, while taking the States’ co-financing leeway into account. Both states will endeavour to involve themselves even more actively in the formulation of European research and innovation policy.
Marketing and profile focusing

- Owing to the international presence of the clusters/future fields of excellence, the supra-regional visibility of the innovation competence concentrated in the capital region also needs to be further enhanced by suitable and joint marketing.

- A coordinated marketing effort is aimed at communicating the location’s existing advantages in the regions’ international competition, while highlighting and expanding the notable international position in the science and research landscape with suitable measures. Besides the location marketing, a permanent sharpening of the capital region’s profile in the sector marketing along the clusters/future fields of excellence is gaining in importance.

- What is needed for this is a suitable, broad-based communication policy such as, for example, joint attendance of trade fairs, online portals and public relations. The clusters themselves augment this toolbox with own specific marketing campaigns for their cluster partners, in order to increase the visibility of individual clusters.

- The existing marketing tools available in both states are combined, optimized and reinforced in strict alignment with the guidelines of the joint innovation strategy. To approach this regionally, nationally and internationally is an agreed aim.

The clusters/future fields of excellence will gain new strength from the grouping of these task areas, and from the close cooperation with the institutions responsible for the location marketing, internationalization, for locating businesses within the region, and for the development of the existing facilities. The cluster structures will ultimately be developed individually, in a target-oriented manner, and in line with the specific properties and specifications of each cluster.