

New products of non-woven and textile materials

A different perspective

AstaZero is the world's first full-scale test environment for future road safety. It enables research, development and certification of future road safety systems, and functions as an international arena open for vehicle manufacturers, suppliers, legislators, universities and colleges from throughout the world.



AstaZero is a strategic initiative of Swedish actors in the area of road safety. It brings together all relevant knowledge and resources, and it enables new types of cooperation. It thus makes it possible to attack relevant problems in novel ways and to increase Swedish competitiveness through innovative solutions.

AstaZero is not the place where the actors make their new business. It is the place where they build new collective abilities to create competitive advantages in future markets. The cooperation at AstaZero will create new knowledge and a strategic leadership in the area of road safety. This is the basis for large-scale innovations in that area, and there's where the new business is.

If we were in the road safety area, our first strategic project would be to establish this joint platform.

Our platform concept

Our area is too diverse to capture in a single test facility. Much the same effect can be achieved in a platform concept, by bringing together three types of resources on a strategic level.

- ✓ The first is to build a national **knowledge platform**, where all relevant actors can share problems and opportunities, define new cooperation and approaches, build new collective abilities, and thereby make possible large-scale innovations in the area.
- ✓ The second is to make available the existing national **infrastructure** in different technology platforms, where labs and pilots can be put in cooperative use to facilitate the desired development.
- ✓ The third is to make available existing and promote new **test beds**, where new products of non-woven and textile materials can be tested for customer value and societal needs in situations close to real markets. A test bed is thus not in a lab, but in the real world.



The platform is not the place where the actors make their new business. It is the place where they build new collective abilities to create competitive advantages in future markets. The cooperation in the platform will create new knowledge and a strategic leadership in the area of non-woven and textile materials. This is the basis for large-scale innovations in that area, and there's where the new business is.

We are in the area of non-woven and textile materials, and our first strategic project is to establish this joint platform. The aim is to create a collective ability to develop the area in a way no single actor can do alone.

The platform is a structure and system changing effort that will live on long after the end of this project. The aim is that the platform will bring together actors and develop the area. This includes attraction of funding from national and European sources, and it includes international visibility.

Concrete action

The platform will not be enough by itself. Its strategic impact needs to be combined with concrete action to illustrate potential and decisiveness. This is done through utilization of existing results that have potential to become innovations. The right team of actors performs the necessary development, and provides a proof of concept that targets an identified customer value or societal need. The choice of topic is made considering the possibility to reach a market in reasonable time and the attractiveness for companies to engage in kind. New cooperation and new value chains are also desirable.



One topic is just a pillar, but a number of pillars can carry a bridge. A number of topics brought to proof of concept can thus illustrate the potential of the broader area.

When a first round of proofs of concept is landed, the platform will also be established. Further initiatives will then originate from the platform cooperation, and will not only be based on existing results but will be new approaches to attack relevant problems in novel ways.

Work packages

The strategic project is arranged in work packages. A coordination work package manages the project, three structure work packages establish and run the platform, and a number of implementation work packages exploit specific topics.

| | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | WP0: Coordination |
| | | | WP1: Knowledge platform |
| | | | WP2: Infrastructure |
| | | | WP3: Test beds |
| WP4: Proof of concept X | WP5: Proof of concept X | WP6: Proof of concept X | WP7: Proof of concept X |

The structure work packages WP1 – WP3 establish and run the platform, while the implementation work packages WP4 – WP7 exploit specific topics.

WP0: Coordination

Aim: Coordinate all efforts in the strategic project, ensure expected development of the platform abilities, manage systematic learning, and report to BioInnovation Management Team and to Vinnova.

Targets: *<To be defined>*

Work package leader and implementation team: See the section “Project leader and platform leader” below.

Control points: *<To be defined>*

WP1: Knowledge platform

Aim: Build a national knowledge platform, where all relevant actors can share problems and opportunities, define new cooperation and approaches, build new collective abilities, and thereby make possible large-scale innovations in the area.

Targets: Agreement on organization, tasks and work forms. List future responsibilities of the platform. Man the platform management team and run the platform beyond the scope of the strategic project.

Work package leader and implementation team: *<To be defined>*

Control points: *<To be defined>*

WP2: Infrastructure

Aim: Make available the existing national infrastructure in different technology platforms, where labs and pilots can be put in cooperative use to facilitate the desired development.

Targets: Agreement on availability of specified facilities, formalized as part of the knowledge platform.

Work package leader and implementation team: <*To be defined*>

Control points: <*To be defined*>

WP3: Test beds

Aim: Make available existing and promote new test beds, where new products of non-woven and textile materials can be tested for customer value and societal needs in situations close to real markets. A test bed is thus not in a lab, but in the real world.

Targets: Agreement on availability of specified facilities, formalized as part of the knowledge platform. Plan for new facilities to establish and include.

Work package leader and implementation team: <*To be defined*>

Control points: <*To be defined*>

WP4: Proof of concept X

Aim: Present a proof of concept based on an innovation. Target an identified customer value or societal need.

Targets: Demonstrate potential of technology or market.

Work package leader and implementation team: <*To be defined*>

Control points: <*To be defined*>

WP5...

Demands on implementation work packages WP4 – WP7

A number of demands are put on the implementation work packages:

- ✓ Address a specific challenge
- ✓ Provide a proof of concept that targets an identified customer value or societal need
- ✓ Potential to become innovations with large demands
- ✓ Possibility to reach market in reasonable time

- ✓ Attractiveness for companies to engage in kind
- ✓ Needs owners are included in the implementation team
- ✓ New cross-boundary cooperation
- ✓ Preferably new value chains / value circles

Time plan

The coordination work package WP0 will be run throughout the strategic project.

The three structure work packages WP1 – WP3 will be run throughout the strategic project, and these activities will be run by the actors also long after the end of the strategic project.

The implementation work packages WP4 – WP7 can vary in number and size. Some will run throughout the strategic project, while some will be shorter or start later.

| | 2015-1 | 2015-2 | 2016-1 | 2016-2 | 2017-1 | 2017-2 | 2018-... |
|-----|--------|--------|--------|--------|--------|--------|----------|
| WP0 | | | | | | | |
| WP1 | | | | | | | |
| WP2 | | | | | | | |
| WP3 | | | | | | | |
| WP4 | | | | | | | |
| WP5 | | | | | | | |
| WP6 | | | | | | | |
| WP7 | | | | | | | |

The time plane for the work packages is divided in half-year periods 2015 - 2017. The plan is definite for WP0 – WP3 and indicative for WP4 – WP7.

Project leader and platform leader

The strategic project will have two structures of leadership, one for the project as such and one for the platform. Each work package will have a work package leader and an implementation team.

The project as such will have a management team consisting of the work package leaders. Project leader and chair of the project management team will be the chair of BioInnovation Expert Team Materials, professor Per Edström at Mid Sweden University.

One expected result of WP1 – WP3 is to establish an organization and efficient working forms for the platform. This includes a management team for the platform itself, which is expected to be run long after the end of the strategic project. The platform management team is expected to take a long-term responsibility beyond the scope of the strategic project, e.g. regarding funding, visibility and development of the area. Platform leader and chair of the platform management team will initially be the chair of BioInnovation Expert Team Materials, professor Per Edström at Mid Sweden University.

Control points and systematic learning

The strategic project will have annual control points for each work package – some work packages may have control points more frequently. The control points are defined individually for each work package. Depending on outcome, the work package continues as planned, changes direction or is terminated.

The strategic project will be continuously supported by the BioInnovation core functions *Functional meeting places* and *Systematic learning*. This will ensure that results and new knowledge are efficiently transferred within the strategic project and within BioInnovation as a whole. This will also ensure that the collective abilities of the platform develop as expected.

Budget

Budget is given in kSEK.

Cost budget

| | Salaries | External services | Equipment | Material | Travel | Other | OH | Sum |
|------------|----------|-------------------|-----------|----------|--------|-------|----|-----|
| WP0 | | | | | | | | |
| WP1 | | | | | | | | |
| WP2 | | | | | | | | |
| WP3 | | | | | | | | |
| WP4 | | | | | | | | |
| WP5 | | | | | | | | |
| WP6 | | | | | | | | |
| WP7 | | | | | | | | |
| Sum | | | | | | | | |

Income budget

| | BioInnovation | Own funding | Other financier | Sum |
|------------|---------------|-------------|-----------------|-----|
| WP0 | | | | |
| WP1 | | | | |
| WP2 | | | | |
| WP3 | | | | |
| WP4 | | | | |
| WP5 | | | | |
| WP6 | | | | |
| WP7 | | | | |
| Sum | | | | |

The volume of the strategic project is expected to be at least 10+20+20 MSEK during the years 2015-2017, where half is government funding and half is company contributions in kind or cash.