



**DANISH
TECHNOLOGICAL
INSTITUTE**

CIS Creative Idea Solution

- make innovation happen

A modern office interior featuring a white staircase with a glass railing. The background wall is decorated with large, colorful abstract shapes in shades of red, orange, and green. The scene is brightly lit, suggesting a contemporary and innovative work environment.

“CIS HAS CHANGED THE WAY WE
PERCEIVE INNOVATION. WE DID
NOT KNOW HANDLING IDEAS
COULD BE A SYSTEMATIC PROCESS”

Claus A. Christiansen
CEO
AC Hydraulic

Background

Creative Idea Solution (CIS) was developed in 2000 at the Centre for Ideas and Innovation at the Danish Technological Institute (DTI). The model builds on 20 years of supporting and exploring entrepreneurship and developing products, inventions and services.

Systemized innovation

What sets CIS apart is its systematic approach to innovation. In a highly structured and open innovation framework, CIS fuses timely involvement from for instance, employees, scientists, lead-users and experts via different workshops. Taking it step by step, the complexity of tasks are handled without compromise.

Since its origin, a range of clients including large corporations, government and public organizations, SMEs and entrepreneurs have used CIS. The model's unique feature is its usability in diverse contexts, and its record of accomplishments speaks volumes.

During the last 20 years, CIS has been used in Scandinavia and worldwide to develop services, products, concepts as well as new teaching methods and health care systems. CIS is a genetic method, which sets the scene for innovation to happen.

CIS principles for creating new ideas

- » Never merge ideas! Each idea is unique and deserves to be explored
- » Do not vote! Voting or rating of ideas is not beneficial for creating unique ideas
- » Postpone judgement! Decisions must be postponed, as there are no decision system models in innovation
- » Chaos can be overcome! Using a systematic step by step process, the chaos of innovation can be overcome
- » Keeping it simple is stupid! As described in Cybernetics, complex tasks are not solved by simple methods, but by methods of equal complexity

CIS - Knowledge and Ownership

The CIS process builds on the chaos theory. Therefore, an unmanageable situation or task is divided into small, manageable sequences. Each sequence is treated separately and feeds into other sequences. Together, they form a successful systematic process for creative idea development.

Constant supply of new knowledge

To ensure progress, CIS starts by setting up the main team, which mainly consists of different employees and consultants. It is their job to be innovation leaders throughout the whole CIS process. This team is supported by an idea management software system called Rosetta, which is also based on the CIS framework.

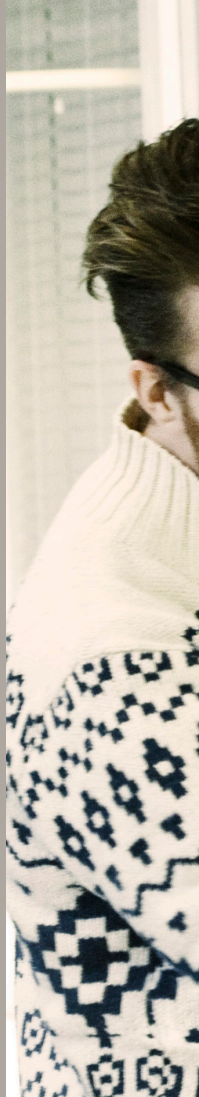
To ensure diversity and involvement of specific knowledge, different groups are gathered and used throughout the process. These groups may consist of employees, customers, scientists, researchers and lead-users. The goal is to add new

insight and facilitate reflection on the main process, explored by the team and the established groups.

Involving employees creates ownership

The involvement of employees is especially important. Although CIS is a lateral process conducted in parallel and separate from the organization, the inclusion of employees has benefits besides the adding of knowledge. By participating in the CIS process, employees gain knowledge about the project or task in question. Thereby, they have a chance to influence the process and get a sense of ownership in developing the solutions. This ownership has the potential of spreading out through the workplace, – with the involved employees as ambassadors.

In addition, employee ownership provides an organizational advantage when the CIS outcome is realized.

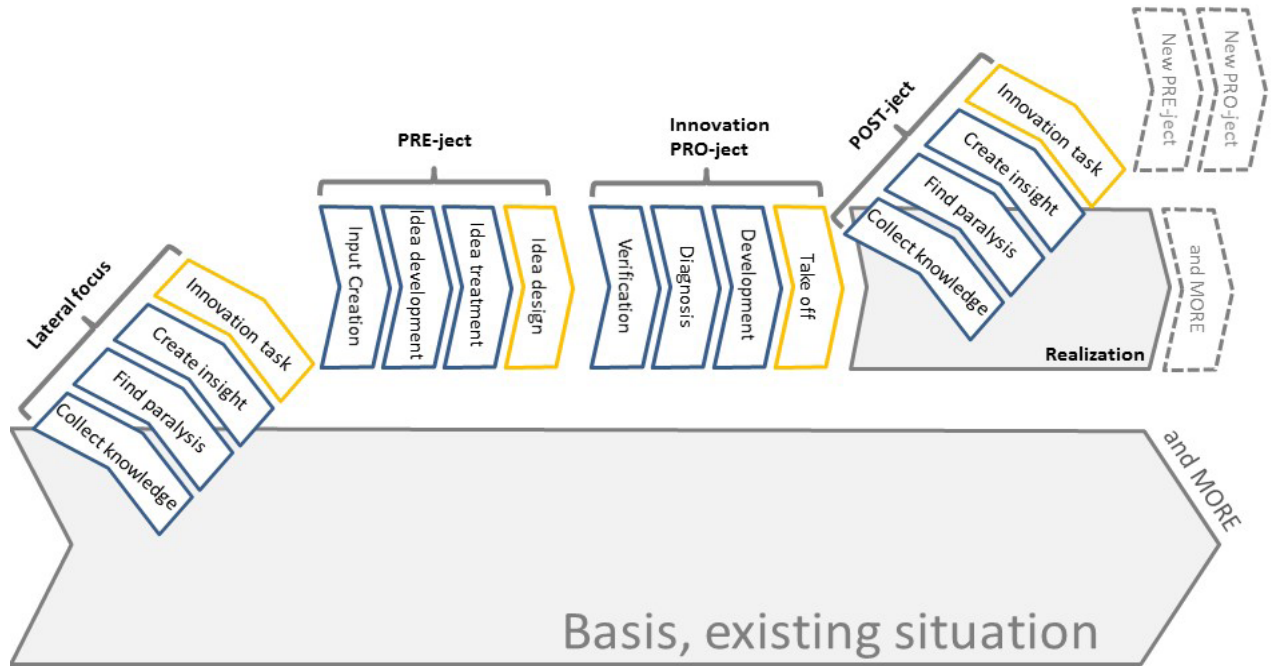




“CIS SHOWED US THAT THE HABITUAL WAY OF DOING THINGS WAS A BARRIER TO FINDING NEW SOLUTIONS. BY INCLUDING EMPLOYEES AND EXPERTS OUR OLD CHOICES WERE CHALLENGED AND WE LEARNED HOW WE CAN USE OUR RESOURCES BETTER”.

Henning Andersen
City Manager
Ikast-Brande

The CIS process



CIS phases

The very essence of CIS is that innovation should be more than a quick fix event happening from time to time. It must be integrated as a continuous activity in every organization – in the same way as one has HR, marketing, production and sales.

CIS idea development is therefore not a single step, but a comprehensive process concerning all the phases in CIS. It is straightforward to follow.

A process in four phases

The CIS process consists of four different phases: Lateral Focus, PRE-ject, Innovation PRO-ject and POST-ject. The CIS process is continuous and therefore the Lateral Fo-

cus phase and POST-ject are similar, as POST-jects become a new Lateral Focus phase.

Each phase consists of built-in sequences, which feeds into each other as illustrated in the model. The main team, formed at an early stage, is the key element throughout the process because they assume innovation leadership.

CIS - the Process

CIS as a model incorporates different procedures put into continuous sequences to become a process.

The lateral focus

The goal of the Lateral Focus is to define and align the main team's perception of the given task. First, an open forum for existing knowledge about the task is created to explore potential assumptions and challenges, plausible barriers and paralysis areas. Here the team members collect new insight using different sources such as experts' studies, customer behavior, user experiences and independent research in a systematic approach.

This new knowledge is investigated and a negotiation of meaning takes place, which again generates multiple possibilities for new ideas. These ideas are explored based on the original focus. Finally, the essential innovation task for the following process is defined. Now the team is ready to look for new ideas to fulfill this task.

The PRE-ject

The PRE-ject phase fine-tunes and conceptualizes the essential task defined in the Lateral Focus. This is done by creating several new inputs. Each input is qualified through an in-depth focused horizontal innovation activity with different specific experts, scientists and lead-users, which once more creates new specified ideas and new possibilities.

Thereafter, each idea from the horizontal activity is processed vertically and made more tangible in its form. The most promising ideas are transformed into concepts, which are then turned into prototypes ready to be developed.

The PRO-ject

At this point in the CIS process, the original task has turned into tangible concepts ready to be verified within the organization. This includes verification of whether the concept actually functions, full diagnosing, followed by further development. Finally, the PRO-ject may

be completed with an actual prototype. Depending on the radicalism of the concept, the prototype can take the form of a science project, research project or physical prototype ready for implementation. Sometimes the PRO-ject phase is done by the organization itself, or the main team may keep its central position in further development of the best realization of the task. On the other hand, the project could also be outsourced.

The POST-ject

Parallel with the implementation phase of the surviving concepts in the PRO-ject, a POST-ject is created. This phase, while similar to the original Lateral Focus, is completely new, thus making the CIS framework a continuous process.





An Example of the CIS Effect

AC Hydraulic is a successful Danish company with 100 employees and market shares all over the world. However, the company wanted to examine the possibility of developing new products using their existing technology. With the use of CIS, they were successful. Today, AC Hydraulic is working on five different business concepts, all of which were conceived using CIS.

Systematic innovation

What first attracted AC Hydraulic to CIS was the systematic way the innovation process is conducted.

“CIS made innovation accessible for us in a new way – and without compromising the complexity of your task at hand. Going through the systematic sequences we have had a more in depth process of generating ideas than ever.” – CEO, Claus A. Christensen.

With approximately 118 ideas after the first idea development workshops in the PRE-ject phase,

there was enough to get AC Hydraulic started.

Involvement of employees and board

Another important feature of CIS, that AC Hydraulic's CEO highlighted, was the involvement of employees, external experts, researchers and scientists throughout the process. In AC Hydraulic's case, board members also participated in the vertical innovation during the PRE-ject phase.

“Usually when we develop products and ideas on our own, it is within a small group of employees. However, CIS has showed us what involvement of employees and board members can do. They take more ownership and are more enthusiastic about the new products than we have experienced before.” – Claus A. Christensen.

AC Hydraulic followed the CIS model from the Lateral Focus and are now conducting the Innovation PRO-ject on their own.

Facts about DTI and CIS

The Danish Technological Institute is a 100-year-old non-profit organization, with more than 1000 employees. The Centre for Ideas and Innovation is one of DTI's 38 business units, which advises more than 200 enterprises and organizations annually.

The DTI's mission is to ensure that new knowledge and technology are quickly translated into value for Danish businesses in the form of new or improved products, materials, processes and forms of organization.

The CIS method is used at several universities in Denmark including Aarhus University and Aalborg University as well as public organizations and other educational institutions.

The first CIS process was conducted between 1999-2000 for the Danish Broadcasting Corporation (DR)

By focusing on radical innovation, incremental innovation will most likely occur - but not vice versa.

CIS works with incremental, radical AND transformative innovation. All combined with radical innovation providing an intermediate stage that extends the paradigm.

© Danish Technological Institute,
Centre for Ideas and Innovation, DK 8000 Aarhus,



“WE HAD BECOME BLIND TO OUR OWN POTENTIAL. THROUGH CIS WE CONQUERED MARKET SHARES WITH NEW PRODUCTS AND GOT NEW IDEAS TO REDUCE COST IN OUR PRODUCTION.”

Ole Jørgensen
Factory Manager
Greif Danmark

Danish Technological Institute

Danish Technological Institute (DTI) is a self-owned, non-profit organization. From our independent standpoint in the market, we develop, apply and disseminate research and technological knowledge for the international business sector.

Drawing on our solid foundation of over 100 years of research in various areas, our thirty-eight business units contribute to the development of both the private and public sphere on multiple levels.

Our mission – your value

Our most important task is to ensure that new and innovative knowledge and technology is quickly converted into value for our customers. This value can take many forms such as new and improved products, materials, processes, methods and organizational structures.

Combining our main areas of knowledge with multiple testing facilities both in Denmark and abroad our main areas of expertise are:

- » Innovation and competitiveness
- » Management and training
- » Sustainable exploitation of resources

We also carry out consultancy and standardization services, which contribute to a dynamic and harmonious development of society.

Centre for Ideas and Innovation

As one of DTI's thirty-eight business units, our area of expertise is innovative business development. We strive to create effective synergies between companies, public organizations, research institutions, end users and citizens.

Participating in large, publicly financed projects, both nationally and internationally, we perform commercial activities in the field of innovation, idea development, business development and new business models with companies and public institutions of all sizes.

Our mission – your growth

At Centre for Ideas and Innovation, it is our goal to make it easier for companies or public organizations to grow and develop their potential. Whether it is a new product line, organizational structure or a more creative mindset – we have the innovative toolbox needed to take on every aspect of the process.

Customized process

Our approach is to customize our innovation techniques to the individual organizational culture we meet in each task, adapting to the specific challenges and creative opportunities. The key motivation is to enable innovation, making it easier for people and organizations to develop and grow.

Centre for Ideas and Innovation's areas of expertise:

- » Strategic product or service development
- » Screening of ideas and business concepts
- » Commercialization of ideas or IPR under license
- » Developing and implementing new business models
- » Open and employee-driven innovation processes
- » Identifying trends within new technological solutions.



DANISH
TECHNOLOGICAL
INSTITUTE

CONTACT

Henning Sejer Jakobsen

Senior Consultant, Author,
and the creator of CIS

Cell: +45 72 20 14 33

Email: hja@dti.dk