

Inventive Problem Solving Using TRIZ

When tasked with improving the performance of an existing product or defining the next step of a product's evolution, Conekt often makes use of the TRIZ approach to problem-solving.

TRIZ was conceived in the former Soviet Union as a methodology to enable systematic innovation. It provides a structured framework to support inventiveness and creativity and when applied it often leads to the creation of breakthrough products that deliver distinct competitive advantages.

TRIZ is now widely used by leading engineering and manufacturing companies throughout the world and has been successfully deployed by ZF TRW to support new product development for over 20 years.



How TRIZ helps with breakthrough innovation

The TRIZ approach to problem solving is based upon the analysis of many thousands of patents. The patent analysis suggested that there are generally only 39 physical parameters or product attributes that engineers consider during the design process. Engineers typically try to optimise a design by considering the trade-offs between each of these parameters. This usually leads to conflict as optimising one parameter often adversely affects another. TRIZ resolves the problem of conflict through the application of 40 inventive principles, each of which had been observed in one or more of the patents that had been analysed.

The observation that there is a recurring pattern to invention and that it can be achieved through the resolution of generic design conflicts gives rise to the TRIZ problem-solving philosophy; the specific problem that you are trying to solve has been successfully solved in a generic form before, the most efficient way to solve your problem is to identify a generic solution which can subsequently be adapted for your particular requirements.

In addition to offering a method to support the resolution of design conflicts, TRIZ also includes an array of other tools and techniques that promote problem understanding and the generation of novel solutions.

How Conekt can support your product innovation activities

TRIZ is most effective when it is used by teams of experienced engineers and technologists who have multi-disciplinary backgrounds. With an expert technical staff that has in excess of 500 man-years of engineering experience and exposure to many different industries, Conekt is well placed to work on product innovation projects alongside its customers' engineering teams. Our breadth of expertise and industry knowledge allows our customers to leverage our input by injecting new capability at the ideation and concept development stages of the product life cycle.

Conekt delivers TRIZ problem-solving support by hosting bespoke problem-solving workshops. The duration and content of the workshops can be tailored to individual customer needs. Whether the goal is to generate new product concepts, incrementally improve an existing product or to extend a patent footprint in a key area of technology, Conekt's facilitation skills and engineering expertise can help you achieve your objectives.



The TRIZ approach to problem-solving

For information about how Conekt can help you to generate new products using TRIZ, please contact us:

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