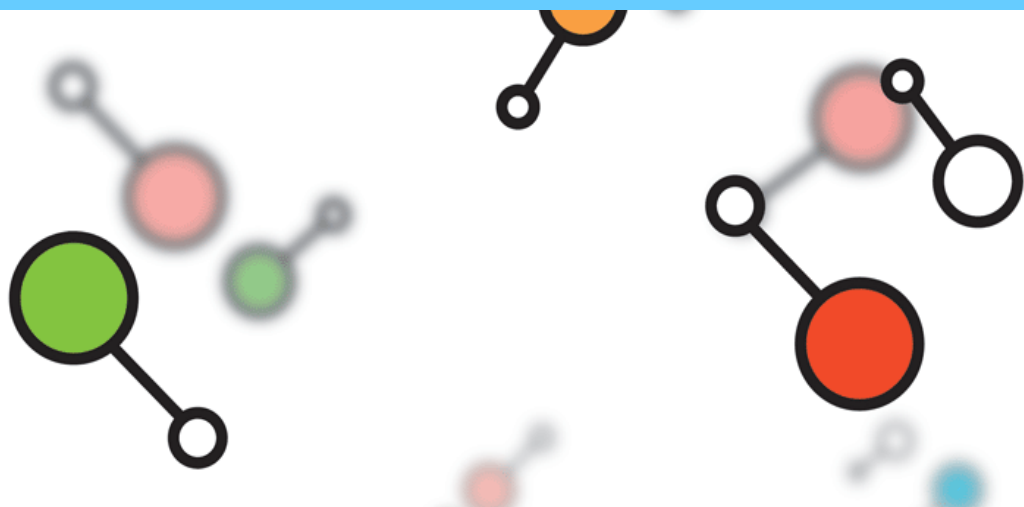INNOCEPT CONSULT
Toolkits for user innovation

WHITE PAPER

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Necessity is the source of all inventions

Projektet er støtte af Erhvervs- og Byggestyrelses 'Program for brugerdreven innovation'

3

Toolkits for user innovation

This paper explores how the cost of extracting sticky information is able to be lowered by utilizing advances in mobile and computerization.

The way this can be accomplished is to use the growing possibilities of computerization and digitalization. This will lead to *"an increasingly common pattern of innovation task partitioning in which users are 'empowered' to customize products and services for themselves at user sites"* (von Hippel 1998, p 2).

Product and service development can increasingly be transferred to users, when: (von Hippel 1998, p 11)

> • The supplier faces heterogeneous demand for a given type of product or service (that is, many of the users served place a high value on custom solutions).
>
> •Agency costs experienced by users who outsource design activities are high.
>
> •The stickiness of application-specific user information is high.
>
> •The stickiness of information held by suppliers that is relevant to application-specific problem-solving is low.

4

Toolkits for user innovation

When working on conditions for transferring development tasks to users and creating a mode of organization that supply high-quality knowledge, a user toolkit strategy is central.

A user toolkit should be designed to a specific product, service, or production system. The idea is that *"within those general constraints, they give users real freedom to innovate, allowing them to develop their custom product via iterative trial-and-error"* (von Hippel 2001, p 2).

The toolkits for customer innovation must provide four important capabilities: (Thomke and von Hippel 2002)

> •Most importantly, toolkits must enable people to complete a series of design cycles followed by learning by doing.
>
> • They must be user-friendly – *"they should not require customers to learn an entirely new design language"*.
>
> •They must contain libraries of useful pre-tested and debugged components and modules.
>
> •They must contain information about the capabilities and limitations of the production process that will be used to manufacture the product.

5

Toolkits for user innovation

The *Customers-as-Innovators* approach was developed as a new approach for product development (Thomke and von Hippel 2002). The theory was developed on the basis of the user toolkit strategy and as it can be seen from the model below, the costumers-as-innovators approach implies that the customer – and not the supplier – handles the design and prototype built. Instead of having a feedback system to the supplier, the feedback is now done customers in-between.
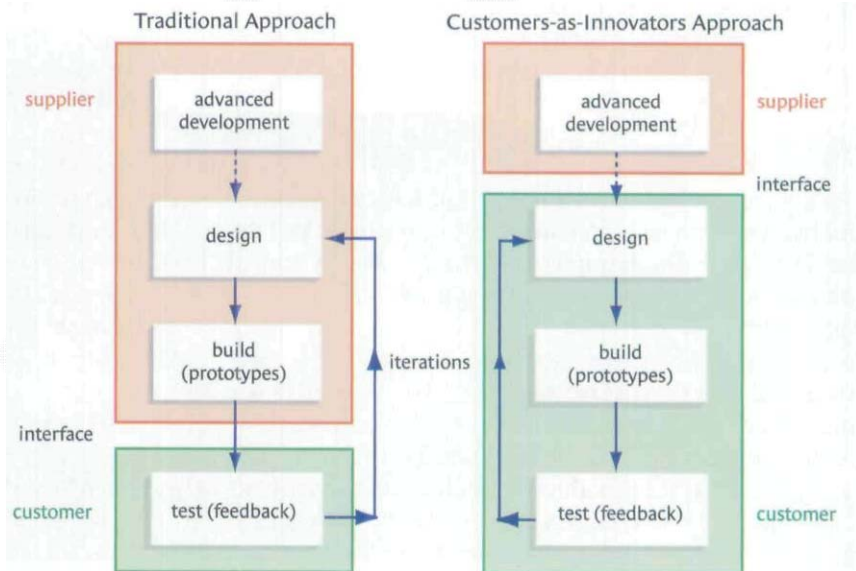

Illustration 5; Costumer-as-Innovators Approach
Thomke & von Hippel (2002)

6

Toolkits for user innovation

The way to turn customers into innovators has been divided into five steps:

- •Develop a user-friendly tool kit for customers.
- •Increase the flexibility of your production processes.
- •Carefully select the first customers to use the toolkit.
- •Evolve your toolkit continually and rapidly to satisfy your leading-edge customers.
- •Adapt your business practices accordingly.

A toolkit can of course not stand by itself; many supporting activities have to be developed accordingly in order to create valuable innovations from the toolkit strategy. For instance, interactive consumer learning will positively affect the value of the toolkit approach.

An example of the value of toolkits follows: *"Modern computer-aided design (CAD) tools can sometimes interface to computer software that converts a design directly into a simulation model"* (Thomke 1998, p 745).

Another simple example of a toolkit is found in the computer game SIMS. The character creation screen allows players to customize their Sim by personality, sex, shade, age and add a biography for their Sim.

Toolkits for user innovation

The following shows different approaches to the toolkit strategy for user innovation. The examples that follows are: Current TV, Shirtcity and Edelwiser.

Current TV is produced and programmed in collaboration with its audience. Current.com are the first fully integrated web and TV platform where users can participate in shaping an ongoing stream of news and information that is authentic and relevant to them. Current's programming ranges from daily pop culture coverage to political satire, music journalism and insights into global stories through Vanguard and Citizen Journalism.

Current have developed a toolkit for user innovation where users create and validate the content on the web platform. Current TV thereafter broadcast the content to cable and satellite and generate revenue.

8

Toolkits for user innovation

Shirtcity makes it possible to individualize personal expressions and make unique shirts. Whether text, pictures, Shirtcity designs, or the users own graphic creations, users can make his own mark/brand with just a few clicks of the mouse.

They have a shirt designer toolkit, that offers over 1,200 graphics which can be applied to over 50 products in thousands of combinations. Shirtcity Club have over 1,700 people that world-wide meet up daily to discuss and share ideas about designs and t-shirts.
There is a 500€ prize rewarded monthly to the best design submission in order to motivate the user developments.

The users can even create his/her own shop and receive commissions directly from Shirtcity. They have developed the toolkit strategy to offer users a toolkit for creating a
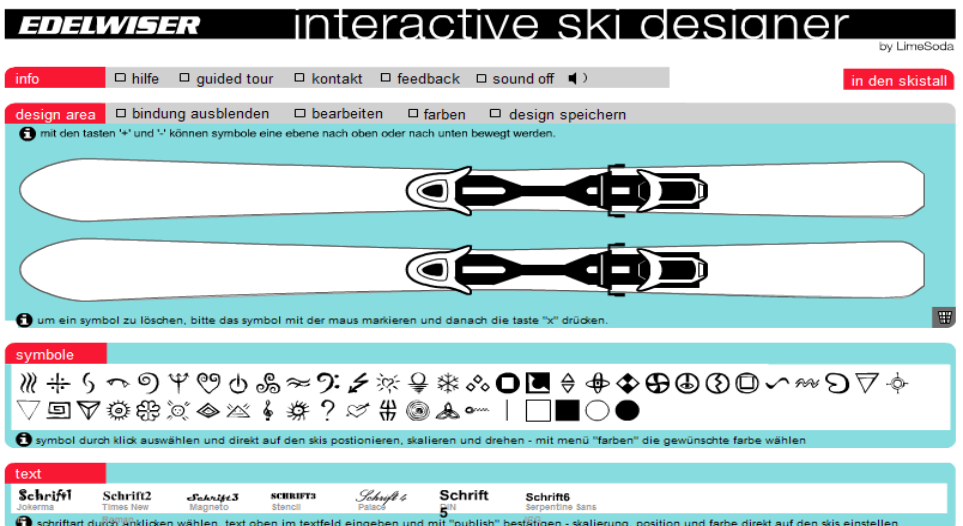
MC1

Toolkits for user innovation

Edelwiser has created a toolkit for interactive ski design. MC2
They let users customize skis and thereby show off their
own ideas and innovations. Once the design stage is
complete, customers can buy their own skis at an
affordable price, costing no more than any standard pair of
skis, and the users get their own unique design.

On the website, users can use the toolkit to create
individual designs on the surfaces of their skis with the help
of a product configurator.

By developing a toolkit for user innovation, creative graphic
ski design is no longer a process done by just a few
contracted designers. Edelwiser has made it a 'public'
process, opening the world of ski design to everyone .
At the same time, this innovation has made ski design
more integrated with the sport's image of freedom and
openness.

EDELWISER interactive ski designer
by LimeSoda

| info | ☐ hilfe | ☐ guided tour | ☐ kontakt | ☐ feedback | ☐ sound off ◀) | in den skistall |

| design area | ☐ bindung ausblenden | ☐ bearbeiten | ☐ farben | ☐ design speichern |

ℹ mit den tasten '+' und '-' können symbole eine ebene nach oben oder nach unten bewegt werden.

ℹ um ein symbol zu löschen, bitte das symbol mit der maus markieren und danach die taste "x" drücken.

| symbole |

ℹ symbol durch klick auswählen und direkt auf den skis postionieren, skalieren und drehen - mit menü "farben" die gewünschte farbe wählen

| text |

Schrift1 Schrift2 Schrift3 SCHRIFT3 Schrift 4 Schrift Schrift6
Jokerma Times New Magneto Stencil Palace IN Serpentine Sans
5

ℹ schriftart durch anklicken wählen, text oben im textfeld eingeben und mit "publish" bestätigen - skalierung, position und farbe direkt auf den skis einstellen

Toolkits for user innovation

The examples from Current TV, Shirtcity and Edelwiser validate the value of a toolkit that can switch the locus of problem-solving to the users, thereby creating value.

The above examples show the possible value of a toolkit strategy. The possible value is further validated through a large-scale empirical study focusing on the initial experimental phase from integrated circuits designs. It has been found that *"users would find it economical to optimize the switching between these modes as to reduce total product development cost and time"* (Thomke 1998, p 743).

To sum up, it can be showed that a flexible and continually developed toolkit for user innovation – that is designed properly – can empower users to handle the design, the building of the prototype, and the feedback system.

Furthermore, if the business practise is adapted accordingly, and the toolkit allows for interactive consumer learning, the value of the user innovation can be greatly improved.

Web 2.0
Vidensdeling
Mobile community
Tool-kit
Afdækning af brugerbehov
Socialiseringsbehov
User Generated Content
Brugerdrevet
Innovation
Forretningsudvikling
Innovation
User Community
Open source
Strategy
Bruger-Interaktion
Brugerbehov
Social software

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Increase the flexibility of your production processes.

Carefully select the first customers to use the toolkit.

Evolve your toolkit continually and rapidly to satisfy your leading-edge customers.

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