



futures-thinking

systematic inventive thinking

'With innovation the best results typically comes by following the nonintuitive route – what can be called the path of most resistance'.

Goldenberg et al, 2003, Harvard Business Review.

summary

Increasingly marketers are suggesting that **customers lack the imagination to envision innovative new products that address their emerging needs or desires** (Goldenberg et al, 2003, Harvard Business Review). They argue that this happens because users typically opt for product/service innovations that feature only minor changes from the current version. Products/services designed in this way often fizzle out because small improvements are not enough to alter customers' entrenched habits.

An alternative way to get beyond predictable product/service extensions is to think 'outside the box' giving creative impulses a free rein, encouraging developers to try and imagine innovative ways to meet customer needs. **But more often than not, this kind of creativity yields a flurry of ideas that while appealing are just too far out, given the company's brand image or capabilities.**

Systematic Inventive Thinking replaces the free-for-all with a highly disciplined 'inside the box' approach to idea generation. Unlike most new product/service development methods, **it starts with an existing product and its characteristics rather than with customers and their unmet needs.**

The method's main thrust: don't just listen to the voice of your customers; listen to the voice of your product/service.

systematic inventive thinking techniques

list internal and external attributes

Begin by **listing the essential elements** (internal attributes) of a product or service, both its physical components and its attributes, e.g. expected useful lifespan, cost. Also look at the product or service's immediate environment (external attributes) again identifying both its physical components and its attributes such as type of user.

example

mobile phone

Some internal attributes – phone's colour, the type of ring, information provided by indicators on the LED screen, remaining charge on battery. External attributes – user's age, user's gender, caller's identity, time of the day when heaviest use.

innovation patterns

Following one or more of the four innovation patterns below manipulate these elements to come up with something new. At the core of this approach is **innovative patterns**. The four patterns have been emerged from historical analysis of product development trends. The patterns are:

reduction

When thinking about new products or services, **you remove components or attributes, particularly those that seem desirable or even indispensable**. Having removed an element developers often see an opportunity to replace it with something better.

multiplication/division

Instead of taking away elements you imagine one or more copies. Then and this is key – **you alter those copies in an important way**. The aim is to go beyond a mere quantitative change (ie instead of a double bin that just holds more rubbish multiplication thinking would suggest a double bin that also allows users to separate their rubbish into disposable and recyclable goods).

Likewise with division patterns, by dividing existing product/service into its component parts you can suddenly see something that was an integrated whole in an entirely different light. That change in perspective may lead you to reconfigure those parts in unanticipated ways. Division can take a number of forms: physical division (a product is cut along a physical line) or functional division (service components with different functions are separated).

task unification

You can often realise significant product/service improvement by assigning a new task to an existing element of the product or its environment, thereby unifying two tasks in a single component.

attribute dependency change

This pattern – albeit a mouthful – involves the **dependent relationships that exist between attributes of a product/service and attributes of its immediate environment**. For example, take a standard pair of eyeglasses. There is no dependent relationship between the colour of the lens and external lighting conditions. By creating a dependent relationship, you come up with a lens that changes colour when exposed to sunlight, eliminating the need to buy a separate pair of glasses for sunny days.

function follows form

These patterns may seem relatively straightforward but applying them takes practice. Listening to the voice of your produce/service **requires you to perceive it in an entirely new way**. This process is hard work, and people usually take a while to feel comfortable with it. But if the process were easy, it would have much less success. **With innovation, the best results typically come by following the nonintuitive route – the path of most resistance.**

further details:

<http://www.idea.gov.uk/ihelp>

<http://www.idea.gov.uk/knowledge>

