

Products and Services from a TRIZ perspective

Background

One key concept in TRIZ is Functionality. We can deconstruct our thinking about terms we use by referring to and exploring the Functionality of the system concepts.

Products and services are used in a wide variety of ways, often perhaps more for marketing reasons and branding than pure rationality.

For example, one company I interviewed as part of some research into innovation made computer software boards. Just the boards, no wires.

They were very clear about identifying themselves as a service company – they sold a design service. The fact that they produced the boards was only down to quality issues, including delivery times. If someone else could provide that functionality they would have dropped it.

Another company I worked with over a couple of years was an insurance company. They were very clear they were a product company. They ‘made’ financial products and the fact that they serviced them was secondary.

So it seems useful to decode what is ‘Primary’ and what is ‘Secondary Functionality’ (TRIZ terms) in the determination of service and product and work with TRIZ separately to deliver Primary Functionality in the most efficient and effective manner.

Services Deconstructed

Let us take a variety of services, or at least organisations that perhaps most people would see as being in the service industry, and decode what they deliver.

Taking the Entertainment business, they provide an entertainment service to people.

But if in the theatre, they either write (‘produce’ a play) or they perform (produce a play which someone else has written) or both, and the production elements are the same as other manufacturing processes involving design, testing, logistics, marketing and selling. In TRIZ terms the Theatrical Business would be seen as a Product company.

We could also take medical services, hospitals, primary care and secondary care.

These also take supply side input and change it to create a better product. They survive hopefully on the quality of the end product.

There are service elements to their business, so that personal care may become of primary importance, especially for those with incurable illnesses, and this conflict is one which is a problem to disentangle in the current system, which is why it is being explored.

But if the medical services were not successful at the Product Quality Function they should soon go out of business.

In this analysis it is quite ironic that the Primary Care is probably more oriented towards service and Secondary Care (Hospital “Services”) towards Quality Product.

A logistics company would be another example of a service (timely delivery of goods without harm) which in TRIZ terms is just part of the manufacturing process. Parameters of the Products needing shipping are just wrong, the things are in the wrong place, so the logistics company has to change these parameters so they are in the right place at the right time.

The principle parameter to determine service or product would in TRIZ terms be the extent to which products are individually tailored or mass produced.

Something that is mass produced and delivered appears more accurately termed a product and something that is made for each individually can be termed a service.

For those who know TRIZ this is easily identified as a Contradiction. What we want from mass production is low cost and guaranteed quality (in terms of meeting previously decided design criteria). What we want from a tailored product is perfect local quality (meeting an individual’s needs exactly) but this has high cost implications.

If we look at the ‘value’ to companies of delivering services or products or both, we can see that a company can get a high return from mass products provided it has mass sales and can design to meet a mass market at sufficient quality and price.

It can be easier to get a high return from highly tailored services because the supply demand equation is often very different.

But each profit profile depends very much on the market and product and service at the time. If we train too many chefs then we might see a rise in tailored services of quality but a reduction in profit for each.

Some companies can make more profit from the service value for their products than for the products themselves. Rolls Royce sell their engines at a loss and then profit from a necessarily tailored servicing of the engines over many years. Each engine is treated as unique and customers have to pay a high price for the servicing as only Rolls Royce are allowed and can deliver that service.

So a TRIZ approach to Product analysis and Service analysis is to determine, with expert advice, which has the Primary Functionality and then look through ideas leading to innovations for that Functionality.

Running courses alongside Consultancy enables us to make clear what the Primary target is and deliver according to that target.