

## **Innovation in Services**

by

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April 12, 2006

It would seem that the design and management of service systems is suffering due to a lack of innovation. As managers and engineers, we tend to like, maybe prefer, the specified, physical and visual world of products. Things fit together, or not. The product works, under prescribed conditions, for a prescribed purpose, or not. If a part is broken, dull, or missing, the evidence is visual, physical, and repairable. We like the idea of being able to follow a specific recipe to produce the product repeatedly, without variation, and with defined levels of performance and quality on every copy. Products that are produced by the specified method, with the specified materials, and meet the criteria are “happy”. Can the human recipient of services produced by similar methods and technologies be different?

So, we have recently approached rapidly expanding needs to render services with the well tried and understood manufacturing mindset. We have done our best to design, engineer, and manage service systems as though they were simply producing strange, non-visible products. Customer support systems answer callers and force people to parse their needs mechanistically to get them to the proper server person (machine). Hospitals serve patients, but with an approach adapted from the world of product rework e.g. diagnose, classify, and forward to the appropriate doctor or technologist for repair. Airlines provide “services” by moving planes that happen to have people on them according to a regular schedule, with pre-set resource allocations. To be “well served”, the flying customer must adopt the appropriate behavioral configuration – travel when the plane is going, eat before boarding, etc.

As it happens, then, the services we need are designed to assume that we will learn how to be proper “products”. If we learn and use the configurations as we are supposed to, we are “well served”. If we vary, or want to vary, we are passed from one serving specialist to another until we do configure in a recognizable way.

It didn't start like this. Service probably used to mean something like “people taking care of people”. What began perhaps 15 years ago as some service automations had human service providers close at hand in case of a variation of the customer's need from the automated system's expectation. In recent years, however, totally planned service systems, which translates into totally configured customer behaviors, have become ubiquitous. The presence of a human is very far removed from the service system entry point, if present at all. To be served, we now must each learn a myriad of these customer postures and configurations. If we call a help line, we must have our 16-digit id and password ready. If we visit the clinic, we must have our insurer, employer, medical history, and other data ready for the server. Service today means becoming for a while, the right kind of product.

We know and applaud how manufacturing has moved from a craft to mass production to flexibility and mass customization. Oddly, service is seen to be following the same trajectory, but lagging. Service began as a craft and certainly, now, has moved to a mass production “productized” model. But services are often about a company’s interactions with its customers, and customers have very different – sometimes unique – needs. What is lacking in the science of service organization and delivery? What prevents the rapid adoption of the concepts of mass customization to the business of service delivery?

Innovation is the answer. We will need to innovate to create the intelligence in service systems that will regain the human-to-(virtually) human practice of service we once enjoyed. This means innovation to create new levels of development and application in intelligent automation, namely self learning expert systems, flexible data mining systems, and advanced clinical systems (such as intelligent electronic medical records). Innovative theory in the areas of interpretive requirements specifications, propagating task lists, self monitoring algorithms to assure sufficiency for purposes of quality and productivity requirements, and complex benefit cost modeling that deal with monetary and non-monetary elements will be needed. Until then, our multiple product personas will necessarily need to continue to expand to meet the growing demands of our service providers.