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Energy 2014

Proposed Systematic Priority Deployment Method of Strategic Initiatives

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The mission of the Power Generation Division at NextEra Energy is to deliver certainty of operations and maintenance for all its non-nuclear assets. Exceeding organizational goals are driven by the implementation of quality oriented continuous improvement opportunities that add value. This paper proposes a systematic method to deploy strategic initiatives across the business unit that places emphasis on selecting projects of maximum value. Leveraging a systematic method across all fleets in the business unit make it easier to share best practices across the enterprise, provide line-of-sight from high value projects through to business unit strategies, and promote consistency in selecting projects with maximum value in meeting customer needs.

Keywords: Blitz, QFD, AHP (Analytic Hierarchy Process), Priority, HOQ (House of Quality)

Information Technology / Software 2014

QFD for Cloud Computing

Prof. Dr. Georg Herzurm and Dipl. Wirt.-Inf. Sixten Schockert, University of Stuttgart, Germany

The introduction of the client-server model in the 80s had a huge impact on the information technology used in manufacturing industry as well as within IT organizations (e.g. concerning the operation and the development of applications). Just like that, cloud computing will have a severe impact on almost all industries. This paper describes how QFD can be used to define specifications for cloud based IT solutions. Starting with the global mega trends, this paper explains the characteristics of cloud computing and their impact on the application of QFD, especially on the collaboration of all involved stakeholders. From this analysis and a conducted case study with a German information technology service provider, the authors derive several recommendations on how to execute QFD for cloud computing.

Keywords: Cloud Computing, IT, QFD

Helping Software Engineers Apply QFD Methods

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There are many documented benefits of using QFD. The software engineer can use QFD as a framework for activities aimed at improving the quality of software. Since QFD was originally proposed to develop high quality manufactured products, a few considerations must take place before applying it to software development. Based on the waterfall model (four phase model), the researchers of this academic paper point out how QFD tools can be used to benefit software engineers, what features QFD is missing with respect to common software engineering practices, and how QFD can become more applicable to software engineers.

Keywords: QFD, SQFD, Software Engineer, Software Engineering, Waterfall Model

New Kano Model 2014

New Kano Model — How to Really Excite Your Customers

Harold Ross, QFD Green Belt®, Director, QFD Institute; General Motors (ret.), USA

Dr. Noriaki Kano developed an interesting approach to classifying quality attributes by determining customer satisfaction with different levels of product features or performance. Results of a unique survey of positive / neutral / negative responses to questions can help developers determine whether a new feature or performance would be an exciter or a basic expectation of the customer. General Motors began using Kano's method some years ago and achieved additional insights by making adaptations of the method. Among these insights included revealing unknown market segments, marketing/advertising content, and clearer performance targets for each segment. This paper discusses details of this as well as a case study for automotive braking systems. This modified approach is now called the New Kano Model and will provide better understanding of the model and implementation.

Keywords: New Kano Model, Attractive Quality, Expected Quality, Customer Satisfaction Survey

Sustainability 2014

Designing Sustainable Products With QFD

Dale Roach, QFD Green Belt®, Ph.D., P. Eng., Senior Teaching Associate, University of New Brunswick, Canada

As sustainability is often loosely defined and may be desired but not understood by the customer, QFD is an ideal tool for determining a product's requirements. Additionally, sustainable products can involve significant deviation from traditional solutions so it is important to incorporate it early in the design process prior to the rapid decrease of design freedom that takes place once design has begun. This paper examines the process of developing sustainable products and proposes a framework for ensuring that sustainability is addressed.

Keywords: Sustainability, Sustainable Product Development, Sustainable Design, QFD

ISO 16355 and QFD 2014

Driving Your QFD with ISO 16355

Glenn Mazur, QFD Red Belt®, Executive Director, QFD Institute, USA

This paper explains how to drive different kinds of QFD projects based on the advanced deployments in Dr. Yoji Akao's comprehensive book "Quality Function Deployment: Integrating Customer Requirements into Product Design." While most QFD experts are familiar only with Customer-driven QFD which begins with a market focus, these advanced drivers address many other types of new product development projects. Included will be Technology-driven QFD, Cost-driven QFD, Competitor-driven QFD, Regulatory-driven QFD, Manufacturing-driven QFD, etc., exemplified with case studies. These are included in the draft "ISO 16355 for QFD." Find out what you will need to know and change in order to comply with the new standard.

Keywords: Technology-driven QFD, Cost-driven QFD, Competitor-driven QFD, Regulatory-driven QFD, Manufacturing-driven QFD, ISO 16355

Bonus Papers 2014

Using QFD to Design a Multi-Disciplinary Clinic

Children's Mercy Hospital

Keywords: Healthcare QFD

DREAM/QFD to Re-design Staff Service Excellence at Rutland Regional Hospital Systems

Rutland Regional Health Systems

Keywords: Healthcare QFD

Future Combat System Concept Development: Integrating Service and Product Requirements in QFD

Lockheed Martin Missiles and Fire Control

Keywords: Defense QFD

The Analytic Hierarchy Process: How to Measure Intangibles in a Meaningful Way Side by Side with Tangibles

Thomas L. Saaty, Ph.D., University of Pittsburgh

Keywords: Analytic Hierarchy Process (AHP)

Why We Drink Beer: Using QFD, Kansei, and AHP to Understand How Consumers Identify with Brands

Boonrawd Trading International Co., Ltd. (Thai Beer)

Keywords: Beverage, Branding, Market Research