2019 September

The 25th ISQFD & Training

Boise, Idaho USA

About the Symposium

September 6–7 (Fri–Sat)

The 25th International Symposium on Quality Function Deployment

www.qfdi.org/symposium.html

This Symposium (ISQFD) began as a way for industry experts and academics to exchange ideas and learn from each other in a supportive environment.

Celebrating the 25th anniversary, the 2019 ISQFD will have paper presentations, as well as tutorials on subjects important to innovation, business transformation, and value creation using the ISO 16355 QFD standard.

People of all countries and all levels of QFD experience are welcomed at this symposium.

Please plan to join us in 2019 to celebrate the Silver Jubilee ISQFD, in Boise, Idaho USA. Registration Form is included in this document.

To receive new announcements about ISQFD and other important events, please subscribe to our free QFD newsletter, from: www.qfdi.org

"The work that you've done to advance traditional QFD to more effectively align business goals to solution development and delivery is truly outstanding... the penny dropped for me why Blitz QFD® is the fundamental process for speed and accuracy of decision making."

About the Training

The QFD Institute training is designed for innovative individuals who strive to go beyond the traditional tools of customer understanding and insight. It incorporates the latest advancements in quality, design, and innovation.

Compatible with ISO-16355, ISO/QS-9000, Lean/Six Sigma, DFSS/DFLS, Stage Gate™, EFQM, TQM, Baldrige, and other quality initiatives.

All QFD course registrations (see below) include the 2-day International Symposium on QFD.

September 4–5 (Wed–Thu)

QFD GREEN BELT® Certificate Course

www.qfdi.org/gb_public_isqfd.html

September 8 (Sun)

QFD Green Belt® UPDATE Course

www.qfdi.org/gb_update.html

September 8 (Sun)

QFD Black Belt® UPDATE Course

www.qfdi.org/bb_update.html

September 9–13 (Mon–Fri)

QFD BLACK BELT® Certificate Course

www.qfdi.org/bb_public.html

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2019 September • Boise, Idaho USA

Downtown Boise

2016 Akao Prize

Call For Papers

Papers of Interest: (Example)

- Case Study from your own project using QFD
- Advanced Research contributing to ISO 16355
- Development of ISO and QFD Training / Education

What To Send:

- **Author Name, Email, Organization, Job Title**
- **Paper Title**
- **Abstract** (the central point of your paper)
- **What is unique about your paper?** (such as QFD/ISO tools that you used or plan to use, analytic process, supporting data, etc.)
- **Presentation Plan** (If selected, will you be able to travel and present your paper at the Symposium?)

For the details and current information,
please visit www.qfdi.org/call_for_papers.html

Travel

Fly to **Boise Airport (BOI)**, and then take the free shuttle bus to the venue hotel.

Venue

Hampton Inn & Suites Boise-Downtown
495 S Capitol Blvd, Boise, ID 83702 USA
Tel +1-208-331-1900

- US$140 per room/night + tax
- Free airport shuttle (runs every 30 min.)
- Free Wi-Fi, breakfast, fitness room, heated indoor swimming pool, business center

Questions

For questions or if you need assistance,
please email to: contact@qfdi.org

— Testimonials —

"The symposium was an epitomizing point. It helped all the different pieces learned from the QFD courses become cohesive. My knowledge of the tools is clearer, the application potential unlimited..."

"Seeing how others use QFD, meeting those who have been using it or studying for many years in the US and overseas... It was inspiring, made us realize how our business can also benefit from QFD, how we can transform our existing product development..."

The 25th International Symposium on QFD

2019 September 6–7: Case Studies & Research Presentations

www.qfdi.org/symtosium.htnl

(Random order; effective as of May 2019, subject to revisions)

TUTORIAL: QFD for Business Transformation

By Dr. Kim Stansfield, QFD Black Belt® and 2016 Akao Prize® Recipient (Transformational Systems Engineering WMG, University of Warwick, UK), Steve Dimelow, QFD Green Belt® (formerly Rolls-Royce UK), John Fraser, QFD Black Belt® (Protean Electric, UK), et.al.

To remain sustainable in the long term, an organization needs to be able to systematically and rapidly adapt/transform its products, services, business models, resources and enterprise infrastructure in response to the changing business environment. To accomplish this in a coordinated manner, the business needs to be considered as a socio-technical system operating within a very complex and highly dynamic environment. More often than not, the changes in market expectations and technological capabilities demand transformation across multiple organizations in integrated supply chains, where some businesses will be software intensive businesses, while others focused on physical offerings. These changes are being accelerated with the emergence of Internet of Things and Industry 4.0 developments and capabilities.

This tutorial will introduce the principles and relationships between Modern QFD and business transformation planning and development for businesses. The tutorial will reference relevant sections in the new ISO 16355 standard for QFD, and give attendees exercises to connect the principles and key methods, particularly Hoshin Kanri, the initial analytic stages of QFD, and prioritization and methods like the analytic hierarchy process (AHP). The Tutorial will consist of approximately 1 hour of lecturing and 1 hour of exercises using a case study from 'Space logistics systems' scenario.

FORUM: Current and Future State of ISO 16355 and QFD

The members of the ISO 16355 working committee will report the state of the international standard and outline the future plans, as well as the implications of the new standard, notably how you can utilze it to your competitive advantage in new product development, business and service development, and businesses process reengineering. All are invited to participate in the discussion and Q&A.

Net Promoter System to Understand Overall Customer Experience at UnitedHealth Group®

By Carey Hepler, QFD Black Belt® and 2010 Akao Prize® Recipient, NPS Champion, UnitedHealth Group®, USA

Net Promoter System (NPS) was introduced 15 years ago by Fred Reicheld and the global management consulting firm Bain & Company as a C-suite measure of customer loyalty and satisfaction that asks a single "what is the likelihood you would recommend…" question. Major brands like Costco, USAA, Apple, UnitedHealth Group and Amazon.com use it, and they have long held leadership rankings in the industry.

UnitedHealth Group® also has adopted the Net Promoter System ("NPS") to help us understand the overall experience we are giving our customers. This presentation looks at the intersection of NPS and QFD at UnitedHealth Group® where NPS is a sound measuring stick, but QFD is needed to successfully identify and fully implement meaningful systemic change to improve the NPS scores.

This presentation will detail the rigorous Net Promoter System focused on raising quality, delivering value, and simplifying the health care experience for customers and care providers across the Enterprise with:

- Data is third-party-measured and uses statistically accurate sample sizes and rigorous methodology;
- Businesses have implemented methods to identify key loyalty drivers, measure performance;
- Operational metrics are linked and establish prioritized action plans to improve overall performance;
- NPS data is being socialized with faster, more actionable reporting and digital access;
- Newly acquired businesses are enhancing NPS disciplines and adopting the enterprise approach, including global businesses;
- Businesses are obtaining continuous, immediate feedback and closing the loop with individuals;
- Employee engagement is increasing with enterprise-wide education and certification programs.

A case study based on a well-received smoking cessation program will be demonstrated.

Symptom Analysis of Collaborative Software and Design Approach

By Takahiro Yamamoto, Engineering QA, Wacom, Co., Ltd., Japan

Collaborative software deploys both the components and the bill of material (BOM) of the products. It visualizes the relationships and group-sharing while maintaining consistency. Due to these characteristics, collaborative software can become a complex system because it must deal with various 3D CAD and distributed databases.

In order to effectively carry out the quality assurance needed to ensure the availability and safety of both the specification and the operation, it is important to take a systematic design approach toward the invisible issues concerning both work flow and specification, in addition to individual analytic approach to the problems that have occurred. In this paper, the author from Wacom, the designer and manufacturer specializing in interactive graphics tablets and related products, will detail the management of evaluation policy, the analysis of the failure that occurred and the method of reflection to the test scenario. The presentation will also discuss the role of design approach in both improvement of productivity and the realization of sustainable organization that can innovate.

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Development of an Experimental Design for QFD-guided Requirement Validations of Virtual Prototypes

By Prof. Dr.-Ing. Robert Refflinghaus, Lena Blackert M.Sc. and Christian Esser M.Sc. (Department of Quality and Process Management, University of Kassel, Germany)

When newly developed products do not meet the customer's needs, the problem can be often rooted down to an inadequate customer requirements management due to incomplete or misinterpreted requirements. One common method to prevent this from happening is Quality Function Deployment (QFD), which helps to translate customer requirements into product features. Prototype validation is another method, but it tends to happens at a very late stage of the product development process, leading to expensive and time-consuming changes.

The authors proposes a new approach that aims at integrating virtual prototypes into customer requirements validation, enabling system engineers to iteratively ensure the development stages of the QFD. Virtual prototyping provides an opportunity to simulate product characteristics and functions at an early development stage through eye tracking based visual perception and cognitive impression of the product features. This presentation will discuss feasibility of virtual prototype tests, comparative experiments in virtual vs. real prototypes, eye-tracking analysis, and theoretical context model, through the example of coffee machine designs.

Enhancing Quality Assured Design of Flexible Automation of A Complex Composite Component Manufacturing System Using Classic and Modern QFD Approaches

Dr. Kim Stansfield, QFD Black Belt®, 2016 Akao Prize® Recipient (Transformational Systems Engineering WMG, University of Warwick, UK)

A BRITE EurAM European funded research project run between 1990 and 1992 to develop quality assured, flexible automated manufacturing and composite component design system, applied classical QFD approaches to align the designs to key business goals and stakeholder needs. The methods used included process mapping, needs capture and prioritisation using pairwise comparison, the 1st QFD House of Quality (HoQ) matrix or Customer Needs – Functional Requirements matrix, QFD Functional Requirements – Function matrix, process capability studies, design and process FMEA, and the concept evaluation and convergence (Pugh Matrix).

This presentation will discuss how modern QFD approaches could have benefitted this project and would have enhanced the quality focus and project delivery of the collaborative development of the different design and manufacturing modules that were developed. It will also consider how classical and modern QFD approaches can be used in combination to strengthen the reuse of quality knowledge in complex projects and propose an integrated QFD and design framework.

A Proposal to Reliability Deployment of Embedded Software Systems Adopting the STAMP Model in QFD

By Yoshimichi Watanabe, Ph.D., 2013 Akao Prize® Recipient (Computer Science & Engineering, University of Yamanashi, Japan) and Masakazu Takahashi, Ph.D. (Software Engineering and Safety, University of Yamanashi, Japan)

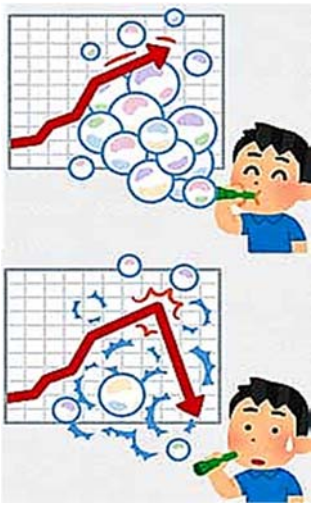
This research proposes a method to design software reliability by incorporating the STAMP (Systems Theoretic Accident Model and Process) model and the QFD. By fusing the QFD Reliability Development and STPA (System Theoretic Process Analysis), it is possible to comprehensively and logically identify potential accidents that should never occur and thereby propose a reliability design method for leak-free safety measures.

In the design of products requiring high reliability such as embedded software systems, the matters relating to the combination of software and hardware greatly affect reliability. It is very important to analyze the accidents that could result from the interactions and combinations of various components. The proposed method aims to ensure reliability by conducting QFD, clarifying the potential accidents and hazards which must never occur, preparing the scenario through STPA and making more effective measures against the critical failures.

Teaching QFD: Understand How to Cause Good Quality!

By Dr. Sixten Schockert, Ph.D., 2016 Akao Prize® Recipient and German QFD-Architect # 1857 (University Stuttgart Chair of Information Systems II, Germany) and Felix Schönhofen, M.Sc. (University Stuttgart, Chair of Information Systems II, Germany).

Teaching quality management tools such as QFD, FMEA or DFSS is a major challenge today: they appear boring to learn and boring to use. “Good quality” as a planning target in any development project sounds old-school and not cool to today's students. Instead, today's young people find innovation methods such as design thinking and lean startup more attractive and more fun because they appear to require less engineering, less systematic problem solving, less groundwork, and more feedback gathering and fun of ideation. They do not realize that the quality is the backbone of ever-growing digitalization and automation in every industry. For example, you cannot (or should not) build an autonomously driving car only by trial and error. Even for easy-to-use products like smart phone apps, quality management is crucial because negative assessments by the users could impact the company success, not to mentioning security issues.



As an educator, we realize that young professionals and students are not yet aware of far-reaching implications bad quality could have in products, services, and design. On the other hand, someone has to design in the necessary quality into the products. This complex task of achieving good quality is not only about tools and about teaching the capability of applying them. It is not about making the students capable of retracing the QFD application tools or a procedure in a development project. It is about truly knowing under which circumstances to use which technique to reach which objective. In addition, it is about a shift in mindset: students have to internalize the essentials of planning and designing high-quality products into their daily work life in practice. The aim of this paper is to present a way to teach QFD, so as that students really “understand how to cause good quality” (ISO 16355-1, p. 3), mentally and on a sustained basis.

A Framework of “Use” for QFD

By Catherine Y.P. Chan, QFD Black Belt® (Hong Kong Quality Function Deployment Association, Hong Kong).

The awareness of social responsibility and sustainability is increasingly becoming a new force that drives business development. This paper is going to present a "use" framework of QFD, how QFD can be useful to businesses that have embraced the new awareness and are trying to incorporate social responsibility and sustainability into their business practices and new product development.

In the 1950s, quality guru Dr. Juran set forth his definition of quality as “fitness for use.” In order to offer greater assistance on achieving this goal of "fitness for use" for sustainability, the author will present different aspects of use and types of customer, how a supplier/vendor can use such information as a guideline to satisfy their customer's goals for sustainability, and where to apply QFD for managing their product development efforts.

German Interpretation and Dissemination of ISO 16355

By Prof. Dr. Wolfram Pietsch, 2009 Akao Prize® Recipient (QFD-Institut Deutschland / Aachen University of Applied Sciences, Germany).

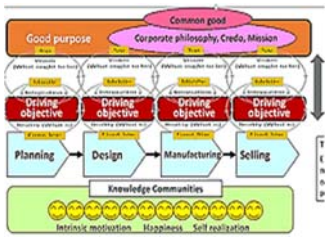
The new ISO Norm 16355 provides an extensive reference for product development methods in general and QFD methods specifically, describing the state of art and best practices worldwide. However it is not devised for the harmonisation of various QFD methodologies and legacy practices. German QFD best practice has been created to provide a reference for QFD methodology and to harmonise. Since it is part of ISO 16355, it is compatible to the standard, but not integrated smoothly and thus does not reap all its benefits.

The presentation will discuss how German QFD best practices will be (re-)interpreted following ISO 16355 in order to upgrade and harmonise German QFD best practices. The resulting German interpretation of ISO 16355 is the cornerstone for the re-launch of the German QFD certification programme and for a wider dissemination of QFD. Although the issues raised in this paper reflect German practices in general, no doubt, many of them are global. Thus, this presentation will be useful to anyone who previously learned the classical House of Quality and might not be aware of the pitfalls and risks of forcing the HoQ approach in today's projects. The presentation will be also useful to the new practitioners who should understand the full power of current best practice in compliance with the new ISO 16355.

Job Function Deployment for Managers to Improve Organizational Capabilities

By Hideaki Haraga (Konica Minolta Inc., Japan) and Koji Tanaka (Kanjie Associates, Japan)

QFD, as classically defined by Dr. Akao, consists of quality deployment and narrowly-defined quality function deployment. In Japan, the latter is sometimes referred to “job function deployment” and it may be expressed in the form of "verb + noun" (e.g., "to achieve the sales goal"), setting tasks such as planning, design, measures, production, sales, customer service, as well as quality assurance metrics so that they are performed in a quality manner. The authors have been studying to expand the scope of job function deployment beyond just quality assurance and business function deployment.



Among two essential job functions of an organization, the authors define "hard management" as management of job functions for achieving the company's performance targets and "soft management" as job functions for achieving organizational innovation. While the former is commonly addressed by policy management (Hoshin Kanri), through the expansion of job function deployment concept, the authors believe they have developed a more effective policy management approach for hard management where their proposed process would help Japanese companies perform business more effectively by linking performance goals and job functions by the use of a matrix.

The authors define soft management as instilling a good purpose for social contribution in an organization and promoting intrinsic motivation by the organization. Managers have an important role here, and the authors focus on the role of Japanese middle managers in this research, using this expanded job function concept. The authors believe this method would lead to innovation and improved corporate capability.

Additional Presentations / Papers

The above lists the confirmed presentations as of May 14, 2019.

For the latest information,
please visit www.qfdi.org/symposium_presentations.html
or contact the QFD Institute: contact@qfdi.org

To activate the form fields, click the upper right button "Open With Different Viewer" and open with Adobe Acrobat.

2019 Registration Form (page 1 of 2)

Please complete the 2-page Registration Form, save it and then send both pages to:

EMAIL: registration@qfdi.org FAX: +1 206-203-3575

1. Please select the program that you wish to attend.

Program	You will attend	Registration Fees	
		When you register BY JULY 6	When you register AFTER JULY 6
International Symposium on QFD (ISQFD)	2 Days Sept 6 – 7	☐ **$435**	☐ $495
QFD Green Belt® Package QFD Green Belt® + Symposium	4 Days Sept 4 – 7	☐ **$2,145**	☐ $2,245
Facilitator's Package QFD Green Belt® + Symposium + QFD Black Belt®	9 Days Sept 4 – 7 Sept 9 – 13	☐ **$6,620**	☐ $6,820
QFD Black Belt® Package #1 Symposium + QFD Green Belt® Update + QFD Black Belt®	7.5 Days Sept 6–13	☐ **$5,420**	☐ $5,620
QFD Black Belt® Package #2 Symposium + QFD Black Belt®	7 Days Sept 6–7 Sept 9 – 13	☐ **$5,120**	☐ $5,320
QFD Black Belt® Update Package Symposium + QFD Black Belt® Update	3 Days Sept 6 – 8	☐ **$1,470**	☐ $1,520
QFD Green Belt® Update Package Symposium + QFD Green Belt® Update	2.5 Days Sept 6 – 8	☐ **$990**	☐ $1,170

ISQFD & Training, Boise, Idaho USA

2019 Registration Form (page 2 of 2)

SEND TO: EMAIL: registration@qfdi.org FAX: +1 206-203-3575

Attendee Name
Job Title
Organization
Industry
Complete Address to be printed on your invoice
Payment Method: Please select one.
◯ **Pay by Credit Card** (Visa, MasterCard, Amex, or Discover) ◯ **Pay by Check** * (US$ drawn on US bank) ◯ **Pay by ACH bank transfer** * (US banks only) ◯ **Pay by Wire Transfer** * * (non-US banks only; see the Terms & Conditions on the next page)
Email Address & Telephone Number
Food allergy, special dietary / barrier free needs, if any:
Photo Permission:
☐ I give permission to QFDI to use my event photos in the email newsletters and Flickr album. This would be done without revealing my personal information (such as name, organization, etc.).
Attendees from Overseas (non-ESTA countries)
☐ I need an official letter of invitation for U.S. visa application.

After you submit your registration, we will email you a payment invoice (with PDF attachment), within 24 hours.

* To pay by credit card or ACH bank transfer,
please click on the blue **"View & Pay Invoice"** button in your email invoice.
This will take you to a secure payment web page.

Registration Terms & Conditions

2019 ISQFD & Training

Registration will be confirmed upon receipt of full payment. Early registration is recommended as class sizes are limited. For questions, please contact us: TEL: +1 734-995-0847, registration@qfdi.org

Payment by Check: Check must be drawn on a U.S. bank in U.S. dollars. Please make a check payable to:
QFD Institute, 1140 Morehead Ct., Ann Arbor, MI 48103

To apply the early-bird registration rates, the check shall arrive by July 06, 2019. For the regular rates, the check shall arrive by August 15, 2019.

Payment by Wire Transfer (for payment over $1,500)**:**
Wire transfer instructions will be sent on your invoice.
The bank fees associated with wire transfer are the responsibility of the attendee. Please instruct your accounting department and bank to add such fees when determining the dollar amount to be sent. Please arrange the fund to arrive no later than July 06, 2019 in order to apply the early-bird rates, or arrive by than August 15, 2019 for regular rates (this allows time to clear the bank process).

Walk-in Registrations: Walk-ins are welcome for the Symposium with credit card payment on-site. All QFD courses require pre-registration. To assure your seat and materials, however, 24-hr advance notice is recommended.

Team Discounts: When three (3) or more people register from the same company (in *any* combinations):

- **QFD Green Belt® Package**: **US$100** per person discount
- **Facilitator's Package**, **QFD Black Belt® Package #1**, or **QFD Black Belt® Package #2**: **US$200** per person discount.

  The discounts will be applied beginning from the statement(s) of the 3rd attendee.

Cancellation after Registration:
When notified by July 06, 2019, full refund will be issued minus a 10% card processing fee if a credit card was used for registration or the applicable bank fees if wire transfer was used for registration (no processing fee if it was paid by check). No refund after July 06, 2019, but **substitutions are accepted, subject to the course prerequisites**.

Prerequisites for QFD Courses

QFD Green Belt® Package Facilitator's Package	**No prerequisites.**
QFD Black Belt® Package #1	You have a provisional QFD Green Belt® earned *before* March 2018.
QFD Black Belt® Package #2	You have a provisional QFD Green Belt® earned *after* March 2018; OR— You have a full status QFD Green Belt®; OR— You have a full status QFD Black Belt®.
QFD Black Belt® UPDATE Package	You have a provisional or full status QFD Black Belt®.
QFD Green Belt® UPDATE Package	You have a Provisional or Full-status QFD Green Belt®.

What are included in my Registration Fees?

	QFD Green Belt®	QFD Black Belt®	QFD Green Belt UPDATE	QFD Black Belt UPDATE	ISQFD only
Int'l Symposium on QFD (Sept 6–7, 2019) transactions (digital copy)	YES	YES	YES	YES	YES
Applicable QFD Course Training Manual	YES	YES	YES	YES	X
ISO Modern QFD templates (MS Excel)	YES	YES	YES	YES	X
Select case studies	YES	YES	YES	YES	X
ISO 16355 series bibliographic reference papers (1,000 pages e-Book	YES	YES	YES	YES	X
Lunch	Sept 4–7	Sept 6–7 Sept 9–13	Sept 6–7	Sept 6–8	Sept 6–7
Group Dinner (Sept 6)	YES	YES	YES	YES	YES