About QAI Global

Mission
To create a measurable, and sustainable competitive advantage to our clients

Focus
Facilitating Operational Excellence
People Process Performance

Practices
Software Engineering & Management
Project, Program & Portfolio Management
Software Testing & Quality
Business Process Improvement
Innovation Management
Service Management
Human Capability Management

Solutions
Career Framework Design
Skill Assessments
Org. Assessment
Process Definition
Metrics Program
Enabling High Maturity

Learning Design
Learning Delivery (ILT)
Process Implementation
Process Benchmarking
Productivity Improvement
Workforce Transformation

Online Learning
Certifications
Appraisals & Audits
Process Outsourcing
Centers of Excellence
Innovation
## Quick Facts: QAI Trainings and Certifications

<table>
<thead>
<tr>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>35,000+</td>
<td>Assessed</td>
</tr>
<tr>
<td>180,000+</td>
<td>Trained</td>
</tr>
<tr>
<td>45,000+</td>
<td>Certified</td>
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<tr>
<td>7</td>
<td>Practice areas</td>
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<tr>
<td>13</td>
<td>Certifications</td>
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<tr>
<td>145</td>
<td>Course titles</td>
</tr>
<tr>
<td>10,000+</td>
<td>Community members</td>
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<tr>
<td>30</td>
<td>Active federation Chapters</td>
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<tr>
<td>20</td>
<td>Authorized education Partners</td>
</tr>
<tr>
<td>600+</td>
<td>Corporate clients</td>
</tr>
<tr>
<td>57</td>
<td>Consultants</td>
</tr>
<tr>
<td>450</td>
<td>Hours of online Learning content</td>
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</table>
QGLUE uses design to help businesses build services that people love and impact the world around us. Using human centered approach with robust methodology, QGLUE equips people to solve wicked problems by helping them reach a solution that is not just right, but also desirable with design thinking at the heart of it all. We aim to evangelize design and innovation that makes the world better designed and people happier.

QGLUE has conducted Workshops, Design Consultations, Briefings for Senior Management and equipped businesses to become design-led.

To know more about our offerings: [www.q-glue.com](http://www.q-glue.com)
Partial List of Organisations that attended QGLUE’s Design Thinking Workshops

<table>
<thead>
<tr>
<th>Aon Hewitt</th>
<th>Aditya Birla Group</th>
<th>EY</th>
<th>Airtel</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIS</td>
<td>vodafone</td>
<td>MetLife</td>
<td>Cognizant</td>
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<tr>
<td>Nucleus Software</td>
<td>HCL</td>
<td>Nilan</td>
<td>Cipl</td>
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<tr>
<td>Landis Gyr+</td>
<td>ABB</td>
<td>Wells Fargo</td>
<td>Wipro</td>
</tr>
<tr>
<td>Daimler</td>
<td>IBM</td>
<td>CenturyLink</td>
<td>Mahindra</td>
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<tr>
<td>life augmented</td>
<td>Ericsson</td>
<td>ANZ</td>
<td>Ciber</td>
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Hello, my name is David P. Isaac
Consulting Partner and Practice Head
QAI GLOBAL

• Head of Customer Experience and Process Transformation with Reliance Infocomm
• NPD Expert with Godrej Appliances and pioneered the Pentacool Range of Refrigerators
• Innovation TRIZ Expert Certified Matriz Level 3
WHY
81% of executives surveyed place the personalized customer experience in their top three priorities for their organization, with 39% reporting it as top priority.

- Accenture

A total of 42 design firms have been acquired since 2004. 50% of which have been acquired within the last year with Accenture, Deloitte, IBM, Google, and Facebook as the most acquisitive.

- Design In-Tech Report
Design-led companies such as Apple, Coca-Cola, IBM, Nike, Procter & Gamble and Whirlpool have outperformed the S&P 500 over the past 10 years by an extraordinary 219%, according to a 2014 assessment by the Design Management Institute.

- SAP

90% of executives agreed that customer experience and engagement are objectives of corporation’s digital strategy.

- Deloitte
Why Design Thinking

• Today’s reality demands innovation and empathy for the customer from businesses.

• Customers are not only looking for the best service but also the best experience.

• Design Thinking addresses all pressing concerns and questions and divides insurmountable tasks into smaller doable tasks.

• Statistics and market research can give you certain insights, but spending time with the end-user, the insights become far more tangible.

• Failing fast and quickly through prototyping helps you eliminate weak areas.

• Design thinking breaks your preconceptions of what a good solution would be and unleashing new undiscovered possibilities. Leading you to a more desirable and human solution.
WHAT
Hence design thinking is not about solving design problems.... It is about solving business problems with the design process.
Business Thinking

Design Thinking

PROBLEM

SOLUTION

SOLUTION

Understand Context
Always design a thing by considering it in its next larger context –

a chair in a room, a room in a house,
a house in an environment, an environment in a city plan.

Eino Säynäksinen
This is Design Thinking

- Business (Viability)
- People (Desirability)
- Technology (Feasibility)

Experience Innovation
From Thinking To Innovating

The Design Thinking Process

1. **Discover**
   - Problem
   - Empathy

2. **Define**
   - Insights
   - HMW

3. **Develop**
   - Problem definition
   - Ideation
   - Journey map

4. **Deliver**
   - Hills
   - Solution

DESIGN THE RIGHT THING

DESIGNING THINGS RIGHT
HOW
Simplifying the Design Process...

1. Why are we doing this?
2. What are we doing?
3. How are we doing it?
4. How is it going?
Design Process

discover → define → develop → deliver

- general problem
- specific problem or opportunity
- solution
The Design Mindset

Curiosity
An open, child-like mind of being enthusiastic enough to talk about ideas – and questioning them enough to build on that idea rather than think it’s all done.

Empathy
Deeply understanding the people you’re trying to design for and, for the people that you’re entrusted to help. Once you understand what they really value, it becomes a win-win situation.

Systems Thinking
Looking at the interconnectedness of various factors to understand the bigger picture.

Iteration
Work in short cycles to fail quickly and taking a step forward with every feedback.
<table>
<thead>
<tr>
<th>The Design Skills</th>
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<tbody>
<tr>
<td>Visualization</td>
</tr>
<tr>
<td>Storytelling</td>
</tr>
<tr>
<td>Brainstorming</td>
</tr>
<tr>
<td>Observation</td>
</tr>
<tr>
<td>Visual Thinking</td>
</tr>
<tr>
<td>The Five Whys</td>
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</tbody>
</table>

- **Visualization**: the formation of a mental image of something
- **Storytelling**: the activity of telling or writing ideas in the form of stories
- **Brainstorming**: process for generating creative ideas through intensive and freewheeling group discussion
- **Observation**: an act or instance of regarding attentively or watching
- **Visual Thinking**: visual thinking is described as seeing words as a series of pictures
- **The Five Whys**: the primary goal of the technique is to determine the root cause of a problem by repeating the question "Why?"
### Key Concepts

**Frontstage**
The part of your service that the client/customers can see and experience.

**Backstage**
The part of your service that happens "behind the scenes" and is not visible to the customer.

**Journey**
A customer's experience of your service.

**Touchpoint**
A single point of interaction between the customer and the service.

**Blueprint**
A breakdown of both the end-to-end customer experience as well as the surface-to-core backstage of your business process, systems, actors, and policies.

**Channel**
A specific medium in which interactions take place.
Key Concepts

**Ecosystem**
The collective whole of all channels, services, touch points, and interactions in your business.

**Scenario**
A use case that plays out over time that involves your customer's experience combined with your organization's backstage processes and systems.

**Opportunity Space**
An area of your service or business in which you want to focus (e.g. Onboarding, Customer Retention, Help & Support, etc.).

**Actors**
All the users associated with the service including stakeholders, front stage and backstage users.
The Current Experience Map

Problem Statement

Scenario Statement

Insights

Actors

Experience Stages

# 1

# 2

# 3

Customer Actions

Front Stage Staff

Touchpoints

Line of Interaction

Line of Visibility

Back Stage Staff

Processes/Policies

Platforms/Tools

Role

Roles

Roles

Needs

Motivations

Blockers

Needs

Motivations

Blockers

Front Stage

Back Stage
Empathy Map

1. WHO are we empathizing with?
   - Who is the person we want to understand?
   - What is the situation they are in?
   - What is their role in the situation?

2. GOAL
   - What do we want them to DO?
     - What do we want them to do differently?
     - What behavior will we see if we are successful?
     - How will we know we were successful?

3. What do they SEE?
   - What do they see in the marketplace?
   - What do they see in their immediate environment?
   - What do they see others saying and doing?
   - What are they watching and reading?

4. What do they SAY?
   - What have we heard them say?
   - What can we imagine them saying?

5. What do they DO?
   - What do they do today?
   - What behavior have we observed?
   - What can we imagine them doing?

6. What do they HEAR?
   - What are they hearing others say?
   - What are they hearing from friends?
   - What are they hearing from colleagues?
   - What are they hearing second-hand?

7. What do they THINK and FEEL?
   - PAINS
     - What are their fears, frustrations, and anxieties?
   - GAINS
     - What are their wants, needs, hopes, and dreams?
   - What other thoughts and feelings might motivate their behavior?
Service Blueprint

Example Digital Blueprint
Service Blueprint

Example Physical Blueprint
How might we provide a personalized experience for a senior retail store consumer?

Design a better way for a bank manager to immediately and effectively prioritize the most vital imminent threats.
# Idea Generation Techniques

<table>
<thead>
<tr>
<th>Brainstorming</th>
<th>Gamestorming</th>
</tr>
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<tbody>
<tr>
<td>Sketchstorming</td>
<td>Creative Pause</td>
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<tr>
<td>Mind Mapping</td>
<td>Co-creation</td>
</tr>
<tr>
<td>Storyboarding</td>
<td>Workshops  Role Playing</td>
</tr>
</tbody>
</table>
Conventional Approach is Inefficient

The Innovation Challenge

Source: O. Stevens and J. Butcher. “3,000 Raw Ideas = 1 Commercial Success”
…The problems that exist in the world today cannot be solved by the level of thinking that created them...

Albert Einstein
TRIZ

Теория Решения Изобретательских Задач

Teoriya Zadach

Theory Problem

Resheniya

Solving

Izobretatyelskich

Inventive
Origins of TRIZ

Genrich ALTSHULLER: “Trial and Error Method today is considered as a synonym for Creativity. To increase productivity of intellectual work scientific approach should be applied….”

Altshuller start this scientific research in 1946. He was 20 years old...

1949 – First results and letter to Stalin.
1950 - Arrested. Sentence 25 years in prison.

Usefulness in industry applications was proved worldwide during last 60 years.
Innovation as an Algorithm

Patents initially reviewed by Altshuller (worldwide)

Key Findings

- Levels of invention
- Definition of inventive problem
- Patterns of invention
- Patterns of evolution

General Purpose Principles

- Altshuller had access to 200,000 patents worldwide
- Of these 20% represented inventive problems
- He worked with these 40,000 patents to find the common denominator
Innovation as an Algorithm

General TRIZ Problem

Problem statement raised to higher level of abstraction

Solutions suggested on how similar problems resolved in other industries, sciences & technologies

General TRIZ Solutions

“Focusing the Creativity” Down to multiple new Solution paths

General flow of how TRIZ helps to resolve problems and focus thinking

Specific Problem

Traditional Method Path:
Trial & Error, Brainstorming, Lateral Thinking, etc

Specific Solution

A reliable, repeatable & teachable method of innovative and inventive thinking usable by all
TRIZ Innovation - IDEA Generation aids

- Multiscreen diagram
- Defining an ideal system
- Function Diagram
- Contradiction thinking
- Resource thinking
- RCA+ Root Conflict Analysis
- 40 Inventive Principles to resolve contradictions
Multi-screen Diagram for – IT Infrastructure Support

Past
- Software, Servers, IT Device
- Users, Desktops, Support
- functions like HR, Trainer, QA
- Deskside support
- SME, Escalation team, paper
- folders, Excel files, Regular
- phone, email system, writing
- pen and pads

Present
- Supersystem
- IT Device users, servers, networks,
- CRM platform, support teams for
- resolution (3rd Party), Admin team,
- transportation team, IT
- Communications, Onsite support
- System
- IT IS Infrastructure support
- Analists, Remedy – CRM,
- ticketing tool, remote access
- tools, Escalation team,
- Knowledge base, ACD- Call
- routers, desktops, virtual
- phones, emails

Future
- IT Device users, Analyst,
- Program systems
- Self detection and Healing IT
- Systems
- KB, CMDB, AI to self learn
- and deploy best solution,
- IVR, IT Upgrades
What is a Contradiction?

An improvement in one characteristic of a system results in the degradation of another characteristic.

If (we reinforce car body to make it bullet and bomb proof)  
Then (the owner can feel more safe travelling on the road)  
But (the vehicle fuel efficiency is compromised)
RCA+ for Lower accuracy in estimation of AD efforts

- Low accuracy in estimation of AD efforts
  - Estimation model is wrong
    - Logic of model is inaccurate
      - Lessons on-going efforts
  - Less effort in updating or creating the model
  - No assessment or review of the model
    - Logic is blind to leverages
  - Complete input not available from client
  - Information is not used
    - Estimation does not account for bugs and inefficiency
  - Improper project management
    - Information is used
      - Improvement plan for course correction
  - Improper risk assessment
    - Improper effort
      - Losses effort

- Relevant skills not available at client end
  - Direct mapping to technical fees possible
  - Factors that underestimate effort not included
  - Information is complex
    - Improved, simplified, or reduced
  - No intuition for this info is triggered or recorded
    - Skills for people from client and are skill for providing are not identified
    - We never prompted for this information
    - Effort is detailed & lost
  - No review of the requirements identified
    - Generalist can be assigned
  - Steps are not followed rigidly
    - Improper risk assessment
  - Improper project management
    - Information is used
      - Improvement plan for course correction
  - Losses effort
    - Direct mapping to technical fees possible
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        - Information is used
          - Improvement plan for course correction
          - Improper risk assessment
          - Improper project management
            - Information is used
              - Improvement plan for course correction
              - Improper risk assessment
              - Improper project management

Selected Contradictions from RCA+ for Lower accuracy in estimation of AD efforts
Resource Thinking

- Space
- Time
- Information
- Environmental Super-System Resources
- Mono-Bi-Poly Resources
- System Resources
Contradiction Matrix

• Contradiction Matrix is a matrix created by the founder of TRIZ (Theory of Inventive Problem Solving), G. H. Altshuller.

• Altshuller’s was researching the patent database and investigating whether there were some commonalities in the types of problems faced by inventors and the principles used by them to resolve contradictions.

• His finding was that typically any problem can be summarized as a conflict between two parameters. If we increase the value of one parameter, it results in the deterioration of the other parameter.

• Altshuller’s research found that there were 39-parameters like length, weight, reliability and so on.

• Altshuller also found out that inventors over time tended to prefer application of 40-principles

• The Matrix is a summary representation of this research

• It provides innovators with the triggers to resolve the contradictions
Understanding the Matrix

- The image shows a snapshot of the Contradiction Matrix.
- The MS-Excel template with the explanation of the parameters and the descriptions of the 40-principles can be downloaded from the Attachments.
- We next explain the different parts of the template.
Organizations who have embraced TRIZ Innovation
Triggering a Cultural Change
Organization Transformation using Design Thinking

Phase 1

Building a Design Culture

Experience Design Thinking

Phase 2

Use Design Thinking to solve organization problems

Seeding a co-creation/ innovation/ design driven culture/ mindset within the organization
IMBIBING DESIGN THINKING
BUILDING THE DESIGN CULTURE

• Helping the organization identify the right participants for the workshop.
• Co-creating training packs videos, exercises, along with the Team.
• A digital presence to be created inside & outside organization environment with access of material, resource, article, etc.
• Multiple training programs will be created on fundamental of Design Thinking and its application.
• A report will be post completion of all the changes? Or level of progress of learning in a batch, promising individuals and more.
• Mentoring and coaching internal teams to run a pilot for applying Design Thinking.
Organizational Transformation Roadmap

DEVELOPING DESIGN CHAMPIONS

IDEAS TO ACTION

• Helping the organization identify the design champions.
• Developing a custom program for the champions to develop creative confidence and acquire skills to coach.
• A direct consult with the lead trainer on doing pilot project within the organization.
• Post training offline facilitation with lead trainer to understand and overcome obstacle to personal learning programs.
• A single report about the innovation champions progress, post completion of all trainings and pilot projects.
• Provide real time case studies and reading material for references.
Organizational Transformation Roadmap

3 SOLVING ORGANIZATION PROBLEMS

THE DESIGN THINKING WAY

- Consulting experts will be engaging, empathizing and immersing in the client environment.
- Help understand the organization challenge and derive the exact problem statement.
- Design Thinking will be used as a methodology to come up with desirable solution to the problem, guided by a QAI expert throughout the process.
- Pre and Post scenario assessment for impact analysis.
Organization Transformation: Solving Specific Problem

- Research
- Define
- Ideate

1. Find
2. Create
3. Map
4. Deliver
5. Realize

- Digital Prototype
- Create an Implementation Roadmap
- Implement Roadmap
- Value Realization

Organization Transformation: Solving Specific Problem
## Design Thinking Based Transformation: Critical Success Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>Success Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Functional Coverage of Participants</td>
<td>So as to make pilots more effective and increase.</td>
</tr>
<tr>
<td>Identifying Use Cases for Pilots after Introductory Bootcamp</td>
<td>Without pilots, the learning will remain theoretical.</td>
</tr>
<tr>
<td>Quarterly Sense Check with Sponsor</td>
<td>Executive sponsorship helps increase the importance of initiative.</td>
</tr>
<tr>
<td>Showcasing Pilots Journey with various BU Heads</td>
<td>Success of the initiative will spur more innovation and lead to broader acceptance inside the organization.</td>
</tr>
</tbody>
</table>
### Design Thinking Based Transformation: Potential Expected Outcomes

<table>
<thead>
<tr>
<th>Individual</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeding of an innovation mindset, by teaching the building blocks of successful human centered design and more.</td>
<td>Helping break siloes inside the organization and promoting cross-collaboration and creation.</td>
</tr>
<tr>
<td>Learning of a methodology, to move ideas from simple insights to working prototypes, converting the prototypes into viable business models, while generating human centered customer experiences.</td>
<td>Seeing a culture/thought process that small groups can come together easily to create breakthrough ideas for the organization.</td>
</tr>
<tr>
<td>New appreciation for cross-collaboration/co-creation by discovering it can be done in a non-confrontational way.</td>
<td>Helping change the mindset of people from those who do tasks assigned to them, to those who are constantly in the search of creating experiences.</td>
</tr>
<tr>
<td>Empowering individuals to become points of immense value in the future.</td>
<td>Measurable ROI, as pilots/initiatives lead to increase in revenue/customer satisfaction and more.</td>
</tr>
</tbody>
</table>
Case Studies
Institutionalizing Design Thinking: SAP Experience

First hand experience of helping transform SAP

Objective: SAP infused Design Thinking to become a next generation company in the minds of its customers and partners.

Key Journey Points

1) All of SAP comprising of over 80,000 people globally have undergone Design Thinking training, and the skill is considered crucial for success.

2) The entire customer facing organization including, Sales, Presales, Consulting, Value Engineering, Industry teams, were trained to become prepared to sell for the future.

3) In India alone over 500 people in the customer operation, including the entire Sales, Presales teams were trained. 10 people were trained to become design thinking champions.

4) All large internal initiatives of SAP, including strategy discussions, account planning, GTM sessions, transformation initiatives, product development, entrepreneurship, adopted design thinking.

5) Design Thinking was consistently credited with influencing over USD 1 Billion in revenue globally, and USD 15-20 Million in India.
First hand experience of playing a role in transforming a specialty chemicals major.

Objective: To help chemicals major infuse Design Thinking in its daily operations.

Key Journey Points

1) The journey began with a simple training session of members of the IT organization, with the sponsorship of the CIO.

2) The IT team on finding value from the training, decided to do a pilot with re-imagining the supply chain for the future. The pilot lead to a award winning global solution.

3) 50 members of the leadership team then underwent 3 day training at the Hasso Platner Institute in Germany.

4) Pilots were done across the organization including procurement, project sales, customer experience, Internet of Things, finance and more.

5) More trainings followed, the organization has since gone on to establish a concrete eco-system for Design Thinking inside their organization.
Build Innovation Champions

- Identify participants/team
- Train them in basics of Design Thinking
- Train them in applications of Design Thinking
- Run Pilots
- Run Pilots

Create Innovation Eco-system

The central strategy is to train the team and a few members to an advanced level, so they become champions of innovation inside the organization.