



Faster and More Frequent Delivery of Business Solutions:

Agile Development Drives Organizational Change at Global Manufacturer

Creating **winning** teams.

Highlights

- Large, complex, and globally distributed program teams succeed with risk-driven, agile development approach
- Lean governance model and scorecard underpins successful adoption of controlled agility on all types of project
- Projects and programs liberated from reliance on detailed plans and extensive documentation
- Agile solutions delivery becomes enabler for truly global manufacturing operations
- Business more responsive to market demand for more innovative products

Customer Background

Founded in the early 20th century, the customer is one of the largest, most successful, and most well-known manufacturing companies in the world. The business now has over 170,000 employees in more than 75 locations spanning all continents on the planet – a truly global operation.

Like any modern business, the customer's application development (AD) operation is a critical part of the overall business operation. AD has in excess of 3500 people across the US, Europe and Asia, responsible for a range of systems delivery, from small projects, to large, complex, business-critical programs. This number is supplemented by 3rd party supplier resources, who work in both on- and off-shore capacities.

Business Drivers for Change

In early 2010, existing AD practices would probably best be described as "traditional": development approach was "stove-piped" and very document-centric; governance was based on schedule compliance; large programs often took 3-5 years to deliver; solutions delivered often no longer fit the business need.

At that time, the customer's AD executives recognized that the changing conditions within the global manufacturing market – smarter customers demanding ever more innovative products and solutions – meant that they needed an AD capability that could respond more rapidly to the business, and deliver innovative solutions more frequently. Agile systems development and delivery was seen as a potential solution to these challenges.

Selecting 1st Gear: Early Engagement

The customer chose to work with Ivar Jacobson International (IJI) based on our strong heritage and reputation within the software industry. Following a series of executive level meetings in early 2010, the customer engaged IJI to perform a short, focused assessment of the AD operation. This largely took the form of interviews with key members of the organization and lasted around 2 weeks. From this a number of recommendations were made:

- Re-focus on the essentials of software development: without basic good practices across the board, no development approach will magically make things right;
- Streamline processes and reduce waste: use “lean” thinking to focus on what’s really important and necessary
- Interact more with the business: speed and innovation require close collaboration.

The recommendations were taken on-board, and IJI was hired to implement an enterprise-scale agile development approach across the AD group. The size and complexity of the AD operation meant that an “off the shelf” agile approach would be insufficiently flexible, scalable or robust to address the customer’s needs.

Shifting into 2nd: Defining the Right Approach

IJI helped define a new development approach that balanced and blended a number of techniques and practices from different sources, including Scrum and the Unified Process. These included use-cases and user stories, iterative development, product ownership, backlog management, and risk-based prioritization. Additional agile techniques including retrospectives, planning poker and daily stand-ups also played an important part. The beauty of this blended “practice-based” approach was that the approach was adaptable to the needs of the projects and the preferences of the teams.

In addition to the approach, a new governance model was required to support an agile way of working. Previous governance approaches, based on schedule compliance, would hinder an agile development effort. IJI assisted the customer in defining a simple scorecard based on risk, progress and quality trends. Data would be collected each iteration based on completed backlog items.

IJI then led a top-down education program within AD to introduce new agile techniques. A key part of this was the Agile Test Drive: a half-day simulated agile project where AD staff (from CIO down) had the opportunity to get hands-on with agile techniques and really experience the difference that a lean, lightweight and agile approach to project planning and systems development could make. Even extreme skeptics and “died in the wool” traditionalists could be won over using this approach!

Changing into 3rd: Proving Agile Works

IJI worked with the customer to identify suitable pilot projects to prove and refine the approach. It was important that the approach would work not only within the classic agile “sweet spot” – small co-located teams and projects with minimal complexity – but also scale to larger programs. IJI initially provided a small team of 2 part-time highly experienced coaches to support the pilot projects through the initial iterations. The results were successful, with project teams able to perform 2-4 week iterations independently after 2-3 iterations of coaching and support. Release frequency was targeted at three months – with successful outcomes.

By early 2011 the approach had been successfully piloted, and a number of early-adopter projects and programs were identified for coaching in the new agile approach. IJIs coaching team grew to 3 full-time coaches, supplemented by 2 customer internal coaches who were trained by the IJI team.

As the early adopter projects took flight, no longer protected by the “bubble” that so often surrounds pilot projects, it quickly became apparent that much change would be needed for agile to succeed at enterprise-scale. Organizational structure, governance models, and project financing models had been designed over many years to support a traditional way of working, and would only hold back the adoption of new ways of working. Recognizing IJIs experience in organizational change management, the customer decided to put in place plans for a major overhaul of the entire AD organization.

Moving up into 4th: Agile Goes Mainstream

The real test of the new agile approach to systems development was its successful adoption on large, strategic programs. These programs consist of multiple geographically dispersed teams, have 100s of people working on them, and are technically complex.

The adaptable, practice-based approach to agile adopted by AD, easily enabled the way of working to be extended to encompass additional practices to deal with added complexity. In particular, these large projects required a strong focus on architecture and a component-based development approach.

To help deal with these large distributed programs, IJI expanded the coaching team to support AD in the UK and Germany. The strategic programs were able to adopt the 2-4 week iterations as used by the smaller projects, although due to the global nature of the programs, it was impractical to work on a strict 3 month release cycle – releases are now planned and agreed with each business area impacted.

Cruising in 5th Gear: Today & Beyond

Today, the IJI coaching team has grown to include multiple full-time coaches, based in the US, UK and Germany, with additional coaches planned for Chennai & Delhi, India.

AD has many projects, and a number of strategic programs successfully using the new agile way of working. The number of capable AD agile practitioners is steadily growing, but the demand from the business is growing even faster.

The next challenge is to broaden the adoption of the new way of working and complete the roll-out across AD. The customer is looking to grow its agile practitioner community through the implementation of agile centres of excellence, expert leadership, and continued external coaching and assistance from IJI.

Final Thoughts

The customer's business is a truly global one supporting many different regions and countries, each with its own needs and variations. In the not so distant past, using traditional systems development approaches, supporting this business model with IT solutions was difficult and expensive, often requiring years of effort to translate systems between regions.

The ultimate goal is to have simple, common business processes across all geographies, with the ability to accommodate essential regional variations and country specific needs, ultimately leading to lower overall manufacturing costs.

An agile development approach has made this goal possible – enabling the customer to become a truly global manufacturing company, with high business responsiveness, regional flexibility and maximum cost efficiency.



About Ivar Jacobson International

IJI is a global services company providing high quality consulting, coaching and training solutions for customers implementing enterprise-scale agile software development.

IJI improves the performance of software development teams by introducing new practices, and removing barriers to their wider adoption.

Through the provision of high calibre people, innovative practices, and proven solutions, we ensure that our customers achieve strong business/IT alignment, high performing teams, and projects that deliver.

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