



Rapid and Sustainable Large-Scale Agile Adoption at Large Global Telecommunications Equipment Vendor

- Agile practices adopted by 72 teams across 3 continents
- Customized Scaled Agile practices enabled large program agility
- Zero/minimal productivity dips as new practices adopted
- Self-sufficiency achieved after less than 9 months

Customer Background

Cell phones, smart phones and tablets are pervasive. We live in a mobile world of wirelessly connected devices that have transformed the way we live, work and play. The internet is now becoming so ubiquitous that half of the world's population will be connected to the Internet by 2017.¹ In 2012, 26% of Internet traffic originated with non-PC devices, but by 2017 the non-PC share of Internet traffic will grow to 49%.²

Behind the scenes of the services and technology that we often now take for granted are large equipment vendors who produce the software and equipment for mobile and fixed network operators around the globe.

Ivar Jacobson International provided its consulting services to one particular business unit at a large telecommunications equipment vendor, which had approximately 1500 employees, based in Europe and Asia with approximately half of these people involved in software development.

Business Drivers for Change

In 2013, due to intensely competitive pressures in a fierce global market, the telecommunications vendor decided it needed to change the way it organized its software teams in a particular division and the way it went about delivering software. They urgently needed to create competitive advantage by:

- Improving responsiveness (delivering what customers really needed)
- Increasing delivery precision (delivering product when customers needed it)
- Building greater quality into the finished product.

"We are very satisfied with IJI – their consulting and coaching services have proven invaluable to us."

**Agile Transformation
Program Manager**

The root cause of the issues lay in the existing, very traditional, stove-piped, development process, with many different handovers between teams. An agile approach was decided as the best way of meeting the improvement needs and transforming their software development operation. However, simply adopting Scrum would not be enough due to the sheer scale of the organization. What was needed was an approach that could scale, both to the numbers of people involved, and to the large programs of work being undertaken. Based on previous positive experience of working with Ivar Jacobson International (IJI), in mid-2013, IJI was selected to advise on the way forward and assist with the agile adoption.

1 & 2: Cisco's Visual Networking Index, <http://newsroom.cisco.com/release/1197391/>

Defining the Way of Working

The first task was to define an agile way of working that would easily scale to the size of program being undertaken. With a software team of some 700 engineers, distributed across three continents, working on three large programs, with four different areas of requirements, an off-the-shelf approach would be unlikely to succeed. The business unit favoured a customised scaled agile approach and IJI provided strategic advice on how to customize agile practices to fit the scale and structure of their organization, and then to roll it out to the teams. Three-week sprints and 12-week release trains became the standard. Innovative solutions were designed for backlog management, product ownership, and shared code ownership. Ultimately 72 cross-functional agile teams, working with 12 agile release trains, would adopt this new approach.

Coaching from Top to Bottom

IJI provided coaching at three levels: change management, program management and team level.

IJI supported the overall change initiative by coaching staff in practices derived from IJI's approach to sustainable change, ensuring that all stakeholders had a shared vision and roadmap for the change.

"IJI's consultant was truly valued – he brought the right attitude, knowledge and experience, and was always able to lift discussions to a new level."

Head of R&D China

Risks were identified and mitigation plans created, guaranteeing sufficient authority was in place to ensure impediments could be removed. Learn more about IJI's approach to sustainable change [here](#).

At the program management level, IJI helped with program level planning, using agile practices provided by IJI and the organization. This enabled the efforts of 72 teams to be synchronized into release trains. IJI provided training and coaching, with most training taking the form of simulations: hands-on role-play games where people learn by doing.

At the team level, IJI helped stand up 18 cross-functional Scrum teams in Europe in just 4 months, with only 2 full-time people. Another 15 teams were up and running in

Asia, in similar time frame, with IJI's help. This was achieved largely through coaching, using IJI's coaching Kanban model, part of the sustainable change approach mentioned above. The coaching Kanban helps track a team's progress in adopting the new way of working, ensuring that just the right amount of coaching is provided, and that teams are encouraged rapidly towards self-sufficiency. This also ensures that the supplied IJI coaches are able to maximize their value to the client by effectively coaching as many teams as possible, without reducing the quality of the coaching provided.

Measuring Improvements

Change programs are about improving performance – measuring performance improvement is essential to understanding the value being gained from the change program.

IJI helped the business unit put in place a metrics program to track performance improvement, based on Better, Faster, Cheaper and Happier (BFCH) measurement areas. A small number of specific measures were defined in each area to ensure that a balanced set of improvements, including objective and subjective measures, were achieved – i.e. not improving in some areas whilst degrading or regressing in others.

“There is no doubt that delivery precision, product quality and team collaboration have all improved substantially.”

Development Manager

In addition to BFCH, IJI tracked the progress of the change initiative, directly monitoring organizational capability, application readiness burn-down, people empowerment, and team capability.

At the team level, typical agile metrics dashboards were introduced, including: velocity tracking and burn-down charts.

Challenges Encountered and Overcome

Key challenges encountered and overcome included:

- Resistance and reluctance to change at all levels within the organization
- Existing power structures and command-and-control approach to management
- Incumbent development approach, based on waterfall style with document handovers
- Size and complexity of the organization and the system under development

Working together, the organization and IJI overcame these challenges by:

- Simple perseverance – there’s a lot to be said for just not giving up; but this, coupled with the right leadership to drive the change through, is a key success factor for any change initiative
- Identifying the early adopters who embraced the new way of working, and helping these people become evangelists for the change
- Providing a combination of proven and innovative solutions to [scalable agile delivery](#) and [sustainable change](#)
- Establishing coaching hubs to provide coaching and education at all levels to enable the knowledge to spread and “stick”
- Creating internal coaches to lead the change “from within”, building sustainability and independence from day one
- Empowering teams with knowledge and practical solutions to problems, not dogma!

Outcomes

While it is still too early to have meaningful and quantitative results from the metrics program, there is clear subjective and anecdotal evidence to suggest that the agile adoption has been successful and is generating positive results.

There is little doubt within the business division that delivery precision, scope setting, and expectation management have all improved significantly. There is much stronger collaboration and much more working as a team. Product quality is also tangibly better.

In terms of the agile change initiative itself, the opponents have been won over. The organization acknowledges that it was a good thing to do, and most engineers now feel that things are better than before.

Crucially, it is clear that the business unit did not suffer a productivity dip as a result of the agile adoption – in fact productivity had increased – and the group is now achieving more with less people than before.

Finally, but equally importantly, the teams are now self-sufficient in the new agile way of working, and no longer reliant on external support from IJI. In other words, they have achieved a truly sustainable and lasting change – one from which they are now ready to start reaping the rewards.



About Ivar Jacobson International

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

We are passionate about improving the performance of software development teams, and maximizing the delivery of business value through technology.

Whether you are looking to transform a single project or program or your entire organization with lean and agile practices, we have solutions to suit your needs.

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