Pragmatism:
The Key to Enterprise Agility

Strategies and tactics to successfully achieving Lean transformation in enterprise software delivery

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Agenda

- Strategies and tactics to successfully achieving Lean transformation in enterprise software delivery
- Collection of experiences and best practices around enterprise delivery
- Not focused on elements of Agile software development
- Gathered from direct experiences, direct interviews from technology leaders and in-person anecdotal accounts

Content

1. Speaker background
2. Enterprise Agility as a business driver
3. Establishing the extended value chain to enable collaboration
4. Driving change management across the organization
5. Achieving compliance without massive overhead
6. Fostering agility in delivery partners who have not adopted agile
7. Conclusion

Speaker Background

- Began working with mainframes in 1977
- Business trained at Wharton
- Variety of business roles
  - Sales
  - Marketing
  - Operations
  - Client services
- Agile experienced
  - Lean and Six Sigma Green Belt
  - Iterative since the 1990's
  - Global teams including technology and operations at Thomson
  - Enterprise Agile as CTO at ADP
  - Benchmarked including Thoughtworks
  - Applied Lean and Agile for prior client work
  - Currently doing Lean and Agile in client engagements

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Enterprise Agility as a Business Driver

Need for enterprise agility

Agile delivers results

Actionable Strategies

Need for Enterprise Agility

- Organizations must optimize their use of human capital
  - Alignment to strategy
  - Responsiveness to the market
- Agile technology organizations:
  - Collaborate with business stakeholders
  - Deliver value early and often
  - Respond rapidly to change
  - Ensure quality results
- Agile SDLC is only 1 component

Employee Efficiency Drivers

How we organize people

How we manage HR programs

How we utilize people

1. How People are Organized
The way business is organized and structured to deliver its strategy and achieve business goals

2. How People are Utilized
The way the business deploys and utilizes its workforce to meet business and market demand

3. How HR Programs are Managed
The cost and impact that HR programs and delivery models have on the business

Driver #1: **How people are organized**   *(Hewitt Quarterly, Issue 6, Volume 4 - 2009)*
the way the business is organized and structured is a primary driver of cost for any organization... structure must maintain a strong alignment to strategy, while also being agile enough to respond to short-term changes in market conditions.

Agility Delivers Results

- Technology can drive increased business performance
- Agile practices yield increases across multiple business dimensions
- In addition to quantitative results, anecdotal evidence is positive
- Agility in software development does not guarantee agility in delivering enabling technology

"the years since the mid-1990s have seen a onetime burst of innovation from IT… new technologies enabled improvements to companies' operating models and then made it possible to replicate those improvements"

Honing Your Competitive Edge
Harvard Business Review July-Aug 2008

Increased due to Agile	
Productivity	82%
Quality	77%
Cost improvement	72%
Business satisfaction	78%

Agile Adoption Survey 2008, Scott Ambler

Establishing The Extended Value Chain

Establishing executive buy-in

Feedback beyond the business user proxy

QA and the absolute need with Agile

The last mile: IT, configurations & environments

Executive perspectives

Business Linkage → Agile SDLC → Enterprise Delivery

Actionable Strategies

Establishing Executive Buy-in

- IT/Product Development operates under a mandate from the business; link to business governance
- With well aligned organizations, this is explicit
- Without executive support for Agile, there will be conflict
  - Ongoing need to justify investments
  - Support for ("radical") Agile governance mechanisms
  - Resource diversions and other capacity constraints
- Implement Agile at a macro level
  - Collaboration – Plan with business leaders
  - Test driven – Determine success criteria at the outset
  - Frequent iterations – Report often and solicit feedback
  - Refactor – Adjust processes and top level plans as needed
- <u>Make commitments; keep commitments</u>

Broad feedback

- Feedback beyond the business user proxy is imperative in the enterprise

- Multiple conflicting interests requires explicit connection to broad constituents

- Negotiation across interests must be facilitated by the iteration or project manager

- Apply proven techniques such as Force Field Analysis to identify and monitor stakeholders

- Seek "second level" feedback from others connected to stakeholders (e.g., what is being said about the project in sales leadership meetings) for a clearer picture

- This responsibility lies with the technology executive, not the iteration manager / Scrummaster

Quality Assurance

- In the enterprise, there is an absolute need for QA
- Applications have numerous external interactions
  - Other applications in the portfolio
  - Corporate resources such as portals, I&A, DWs/master data, etc.
  - Compliance requirements, security audits, etc.
- The role of QA is elevated
  - Unit testing and functional validation are diminished
  - QA should focus on end-to-end process testing
  - Additional test cases should extend test coverage (which is never complete)
  - QA can use the time recovered from functional testing to automate regression testing
- From a compliance perspective, QA <u>must</u> be performed by staff with a separate reporting line

Deployment: The Last Mile

- Enterprises distinguish between development and IT, often with multiple IT groups tied to an application
- Ensuring an application is actually usable, working software requires program management tasks
    - Compliance such as corporate standards, ARB, legal and regulatory review
    - Configurations must be effectively managed
    - Environments must be available at a more frequent interval
    - IT must ensure that infrastructure is ready for deployment
    - Desktop touches may be required
    - Security must be managed (app access, permissions, etc.)
    - Risk management such as BCP/DR, penetration testing
- Classic techniques such as piloting can mitigate some issues (while iterations continue and code is branched)
- CM / Environments are especially important
    - Typically not well managed and inefficient
    - Agile decreases cycle times, putting more pressure on this function

Most organizations … processes are not documented and few people know how the work is accomplished.

Software Configuration Management, Jessica Keyes

Executive Perspective

Issues and Reason	Avoidance Tactics
Development not making commitments – True if position is "we just do what you tell us"	Framing and commitments are still required: try estimating "chapters" (groups of stories) across multiple teams and still add contingency (hopefully learned from past projects)
Too many questions – Senior management often abdicates responsibility	Take a longer view: decisions are made early to provide options rather than later to find solutions to problems and workarounds.
No testing – Often true in many shops that just "code like heck"	Deploy a QA Lifecycle: Capture test cases and script so users are not repeating tests. Automate wherever possible.
No documentation – Often true	Capture story cards and other lightweight documentation. Involve internal audit / compliance who will appreciate the model.
Disruptive – Users unaccustomed to frequent interaction	Describe the total effort: feedback is gathered early in smaller increments, which is less than the big checkpoints and the re-work that ensues.
Too much testing – True in shops where UAT is weak	Show the exponential cost of finding and remediating defects later in the lifecycle which includes users who are actually testing in production.

Speak in business terms: Agile is Lean, compliant and delivers

Actionable Strategies

Change Management

Communication is not just a Wiki

HR implications

Compensation as a driver

Training and learning

Time expectations

Actionable Strategies

Communication

- Fostering communication is a monumental culture hurdle
- No single event can transform an organization
- Using only a Wiki will not suffice – face-to-face communication is essential
- Jack Welch provided a benchmark (paraphrased): to drive a vision, you have to keep repeating it; just when you feel like you have repeated it so many times you are going to throw up, it will just start sinking in; keep repeating it
- Driving Agile adoption across the enterprise (stakeholders in addition to development) requires frequent and consistent communication

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HR implications

- Not everyone will make it; willingness to separate elite from unable
- Not necessary to terminate unable staff; they can work on lights-on and other non-Agile activities
- Team objectives co-exist alongside individual objectives
- Measurability of results and performance
- Loop HR into your plans and obtain their support up-front – you may need it!
- Job descriptions may no longer be valid but there might not be the exact title "in the system"; pick the closest thing and augment with details of the Agile function
- There will be pain ranging from discomfort to open unrest
  - Prepare for resistance and plan on responses
  - Work with front line leaders to moderate the impact
  - Maintain fortitude as all change is painful and takes time

Compensation as a driver

- Blunting the impact of resistance can be supported by a shift in compensation
- Agile throws off many hard metrics to align compensation
  - Throughput
  - Quality / DMOQ
- Soft measures can also be gathered
  - Customer satisfaction (if appropriate)
  - Internal customer (stakeholder) sat
  - Use directional indicators as absolute measures introduce too much variance

FIGURE 3: **Correlation of performance bonus vs. performance rating**

$$y = 0.7522x + 0.0111$$
$$R^2 = 0.3573$$

Bonus Payout (% of Fixed Pay)

Performance against target
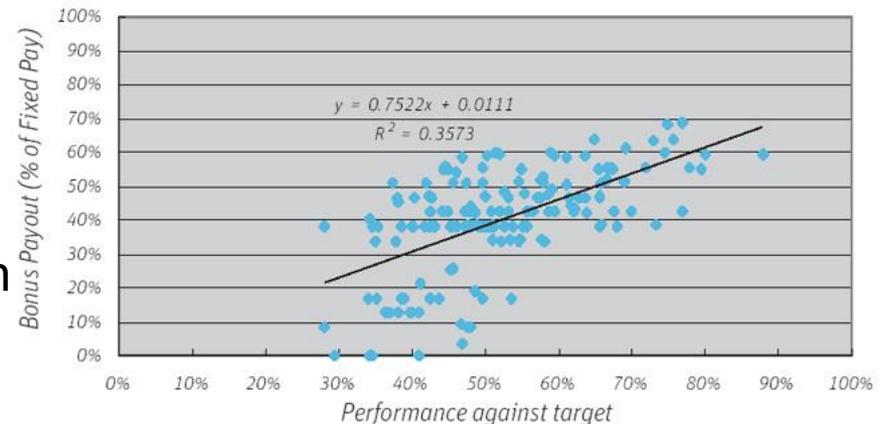
(Hewitt Quarterly, Issue 6, Volume 4)

- Skew rewards so top performers are meaningfully rewarded; token compensation gestures are meaningless
- If budget constrained, use non-cash incentives such as PTO, smaller perks and recognition (use anyway!)

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Training and learning

- Expecting all the staff to magically transform is misguided
- Provide ample training opportunities supported by practical learning experiences (pair programming can work well)
- Enthusiasm for training and learning is a directional indicator of engagement and future success
- As new practitioners acquire knowledge, expect and support challenging questions about Agile
    - Indicator that individuals are applying critical thinking to the new situation vis-à-vis the existing environment
    - Alternatives and pragmatic approaches are often put forth during these discussions / debates
- "Plant" well trained supporters of Agile on the front lines to drive adoption and best practices
- Don't re-invent the wheel; modify it to go smoother and faster in your environment

Time expectations

- Change takes time and happens at an uneven pace
- Learning happens over the first 3-6 months
- Velocity is very low in the first 3 months of actual delivery
- Process doesn't stabilize for 3-6 months (consistent velocity)
- DO NOT tie compensation into metrics for at least 6-12 months
- Give people 6-12 months to "get it"
  - Set clear expectations about behaviors (e.g., collaboration) and results (deliver velocity at the team norm)
  - Provide frequent feedback (they shouldn't be surprised)
  - Deal with them appropriately, starting with warnings at 3 months, including termination if they are not part of your long term plan

Achieving Compliance

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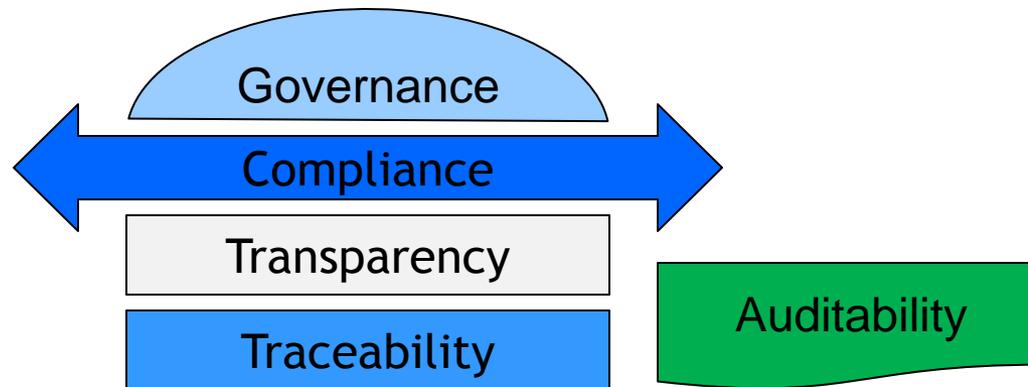
Traceability

- Providing end-to-end traceability of business authorization is a powerful ancillary benefit of Agile
- Tying story cards all the way through to production defects ensures that traceability is maintained
- Driving the cultural adoption of story cards into everyday speech supports their use
- Naming story cards by function and number makes this more usable (e.g., Story Card OE-17 [order entry] or LocationSetup-22)
- E-mail is sufficient for authorization if it references the story card
- Challenges exist in tying Level 1 and Level 2 incident response and tracking to story cards; may not be practical; focus on Level 3

Transparency

- Agile provides unparalleled transparency for internal and external auditors
- Prepare for audits
  - Provide a "slice" or more of Agile from IPM/Scrum through to promotion (typical artifacts that are expected)
  - Prepare a briefing on the process, which should be thinly but fully documented
  - Grant access (including print capabilities) to Wikis and other tools so auditors can examine finished work as well as WIP
- Work with auditors directly (visit the conference room!)
  - Help them understand how things work and their ability to examine artifacts on their own
  - Control the audit! - Prepare a schedule and work them through it
  - Get them in and out quickly – They make a dent in velocity/IDDs

Compliance

- Agile processes can comply with requirements for recognized standards such as SOX and SAS70 (type II)
  - Traceability and Transparency should be well covered
  - QA provides independent verification
- If you are out of compliance, negotiate compliance over time if capacity constrained; reporting real progress towards compliance is often sufficient
- Compliance is a stakeholder if features are required
  - Identify compliance needs in story cards; don't treat it as back-end testing (but do have them test)
  - For high level compliance officers / corporate counsel, release planning meetings and post-release briefings may be sufficient
  - Partner to prevent compliance from becoming "business interdiction"

Governance

- IPMs and Scrums provide solid, compliant (if documented) governance over the day-to-day development process
- Agile processes must connect to larger corporate governance processes
  - Budget allocation for projects
  - Program and project portfolio management
- Linking to other governance mechanisms requires restating Agile terms
  - Rollup progress (e.g., percent complete is 40%, if you have completed 10 of 25 iterations)
  - Reporting in a non-standard fashion leads to confusion and undue scrutiny (impacting capacity)
- Seek latitude in embedding artifacts vs. re-writing

Auditability

- Agile provides auditability but is not voluminous
- Wikis are very useful if the artifacts and conversations are captured and preserved
- E-mails provide a valid audit trail
  - Cumbersome to reconstruct (witness the eDiscovery mini-industry)
  - Pragmatic solutions: generic e-mail box for audit trails / copy and paste e-mail to Wiki (preserve original e-mails)
- Work with auditors to help them understand the completeness of the trail
- Ensure that QA has documentation of independent verification

Fostering Enterprise Agility

Forcing communication in the business

Raising the bar

Organizational seams

Role of the PM

Agile

Raised Bar

Communication

Seams

Project Manager

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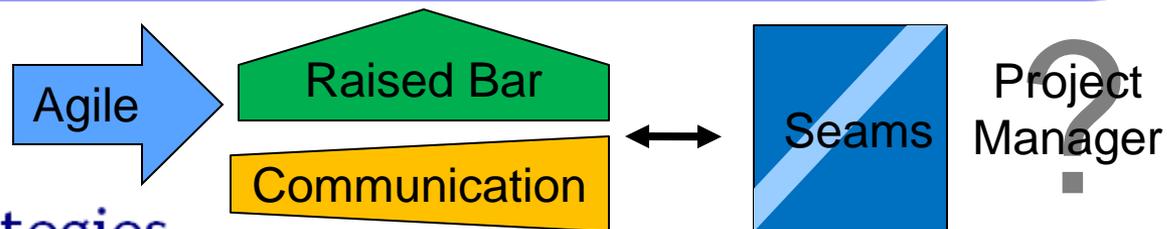
Forcing communication

- Dysfunctional technology organizations are often part of dysfunctional companies
- Communication problems tend to exist in the business, often across political boundaries
- Development may need to drive communication actively rather than waiting for conversations that will never happen
  - Drive at all levels of leadership
  - Make meetings relevant and concise
  - Force decisions to be made, including using closed door, individual meetings
  - Do not use e-mail to drive decisions
- Document and distribute discussions and decisions (sorry, but you really do need to "cover your Agile")
- Executive sponsorship is often required; the senior-most development leader should be working executive relationships to clear roadblocks for his/her team

Raising the bar

- Inside Development
  - Leadership support is critical – participate actively (drop in on standups, discuss burndowns and backlog, review metrics, comment on story cards, be seen in open work spaces)
  - Passive leadership can result in resisters "waiting to see if we are serious about this"
  - Communicate clearly the expectation for better <u>performance</u> and application of Agile to accomplish this business goal
- Business Engagement
  - Driving collaboration and engaging with the business is a right that should be earned (and is required for funding, requirements, testing, etc.)
  - To raising the bar across the organization requires that development attains a higher level of <u>performance</u>, not change a behavior change
  - Set the example and then demand accountability
  - Again, this requires a strong development leader who has forged alliances at the executive level
- Agile development organizations stagnate when the rest of the business is not agile itself

Organizational Seams

- In complex enterprises, organizational seams with other groups will become apparent
  - Technology groups will have problems keeping pace
  - Other development groups will have "impedance" mismatches with SDLC, testing, interfaces
  - Communicate objectives and the means of attainment (Agile) but do not expect change; foster a working relationship
- Business alignment can be challenging
  - Traditional problems with attaining initial consensus
  - Ongoing issues of alignment drift
  - Shifting priorities without business governance starve off resources
  - Significant effort required to maintain buy-in and support
- Compliance must be results focused
  - Compliance functions that seek the letter of the law rather than meeting criteria can be obstacles
  - Standards organizations focused on the form of artifacts over deliverables impart velocity drag
  - Work with compliance functions up front to gain acceptance of process

Role of the PM

- Elevated to program management types of activities rather than low level task management
  - Project initiation including charter, funding, stakeholders, etc.
  - Last mile activities discussed in this presentation
  - Communication about status , progress and forward goals
  - Risk management and mitigation
  - Packaging and report on velocity, backlog and other metrics
  - Collaboration with PMO and other compliance stakeholders
  - Overall project completion including post-partum / metrics review
- Uncomfortable for most classically trained PMs as iterations/sprints do not correspond directly to activities in a Gantt chart
- Partner with the development and business executives to ensure successful business results from project completion (it isn't just about making the date)
- Requires trust in the iteration manager / scrum master

Differences in PM Role

Traditional	Agile
Focus on development tasks	Focus on benefits realization
Internal QA and testing	End-to-end testing
Managing the SDLC	Managing full program
Taskmaster and buffer	Facilitator / orchestrator
Front line engagement	Engagement at all levels
Projects are generic as is knowledge required	Business knowledge and prowess are important
Tangential alignment to business goals	Direct linkage to business impact
Role is reasonably well understood	Role may need to be explained and negotiated

Summary

Summary

- **Establishing an extended value chain**
  - Work with the business in their terms and collaborate at all levels
  - Integrate downstream but be pragmatic
- **Drive change across the organization**
  - Change will induce pain including "talent upgrades"
  - Communication supports changes and blunts negative impact
  - Use compensation realignment and training but be IMPATIENT
- **Achieving compliance without massive overhead**
  - All of the essential compliance elements are present
  - Actively work with auditors to get them in and out quickly
- **Foster agility in delivery partners**
  - Drive and (thinly) document communication
  - Actively lead by engaging at the front line and with other leaders
  - Work the gaps in the seams to minimize impact
  - Elevate the role of the PM to deliver business results not tasks

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