

# Public Procurement Beyond Defined Scope:

A Primer on the Opportunities and Challenges of Modular/Agile  
Procurement



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# Agenda

- ▶ Introductions
- ▶ What is Agile
- ▶ Comparing Waterfall and agile procurement
- ▶ Agile as a challenge to public procurement norms
- ▶ Case Studies
- ▶ References
- ▶ Questions

# What is Agile?

# What is Agile Procurement?

- ▶ An approach to procurement that is flexible, adaptable, collaborative, and results-driven
- ▶ Agility (def): ability to move quickly and easily
- ▶ Complex problems require agility
- ▶ Based on Agile project management methodology in IT
- ▶ Also known as Modular or Iterative Procurement

“Agile means less tell and more show. Fewer 200-page RFPs and proposals and more working prototypes.”

# Agile Principles

- ▶ The highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- ▶ Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- ▶ Deliver working functions frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- ▶ Business people and developers must work together daily throughout the project.
- ▶ Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- ▶ The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- ▶ Working software is the primary measure of progress.
- ▶ Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
- ▶ Continuous attention to technical excellence and good design enhances agility.
- ▶ Simplicity--the art of maximizing the amount of work not done--is essential.
- ▶ The best architectures, requirements, and designs emerge from self-organizing teams.
- ▶ At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

# Agile Methodologies

	AGILE SCRUM	Kanban	XP
Summary	<p><b>Scrum</b> is more suitable for teams who can devote their collective time to a project or product. It brings much more in the way of structure to help teams make major productivity gains through frequent communication and planning while still providing the freedom to decide among themselves how to engineer solutions.</p>	<p><b>Kanban</b> is a really useful way for teams with a continually changing backlog of items to increase efficiency by limiting the amount of work-in-progress, whilst respecting existing roles and responsibilities.</p>	<p><b>XP</b> is more towards Engineering process taken into account and incorporated in our process. XP adds another level of sophistication, bringing a strong focus on quality by insisting on a set of core engineering practices which keeps code clean and software stable</p>
Specialty	<p>A key strength of Scrum lies in its use of cross-functional, self-organized, and empowered teams who divide their work into short, concentrated work cycles called Sprints. Scrum is one of the most popular Agile methodologies. It is an adaptive, iterative, fast, flexible, and effective methodology designed to deliver significant value quickly and throughout a project. Scrum ensures transparency in communication and creates an environment of collective accountability and continuous progress.</p>	<p>In Kanban the workflow is visualized: work is broken down into small, discrete items and written on a card which is stuck to a board; the board has different columns and as the work progresses through different stages (e.g. ready, in progress, ready for review etc) the card is moved accordingly. In Kanban the number of items that can be in progress at any one time is strictly limited.</p>	<p>Extreme Programming is successful because it stresses customer satisfaction. Instead of delivering everything you could possibly want on some date far in the future this process delivers the software you need as you need it. Extreme Programming empowers your developers to confidently respond to changing customer requirements, even late in the life cycle. Extreme Programming emphasizes teamwork. Managers, customers, and developers are all equal partners in a collaborative team.</p>

# Is agile only for technology?

- ▶ Agile is not just a procurement method
- ▶ Agile is not just for software development
- ▶ Agile is a project management strategy
  - ▶ Training
  - ▶ Strategic Planning
  - ▶ Design-Build
  - ▶ Personal planning
  - ▶ Weddings

# Waterfall and Agile Comparison



# Agile versus Waterfall

- ▶ Waterfall methodology is linear and directional

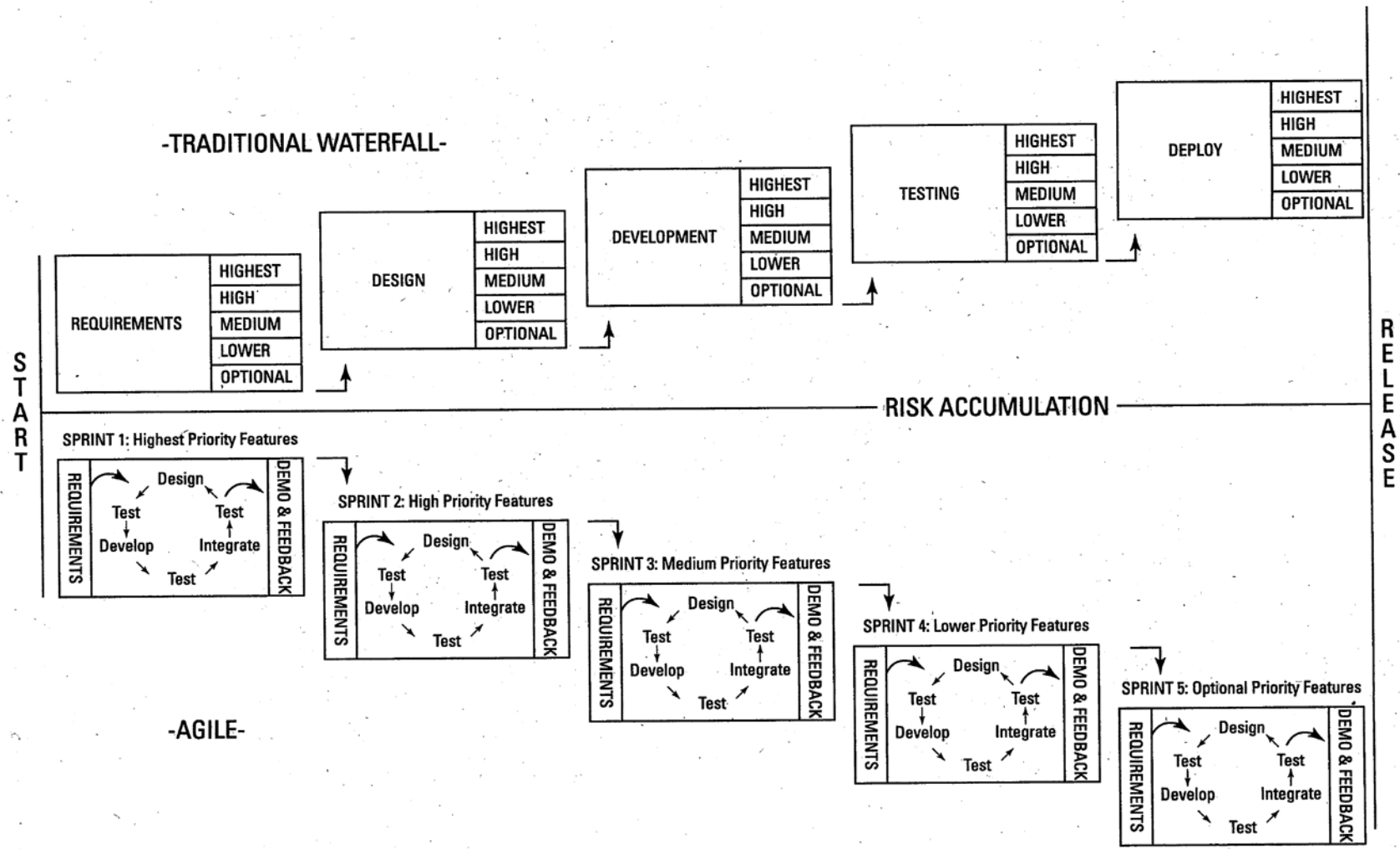


- ▶ Agile methodology is iterative and adaptive

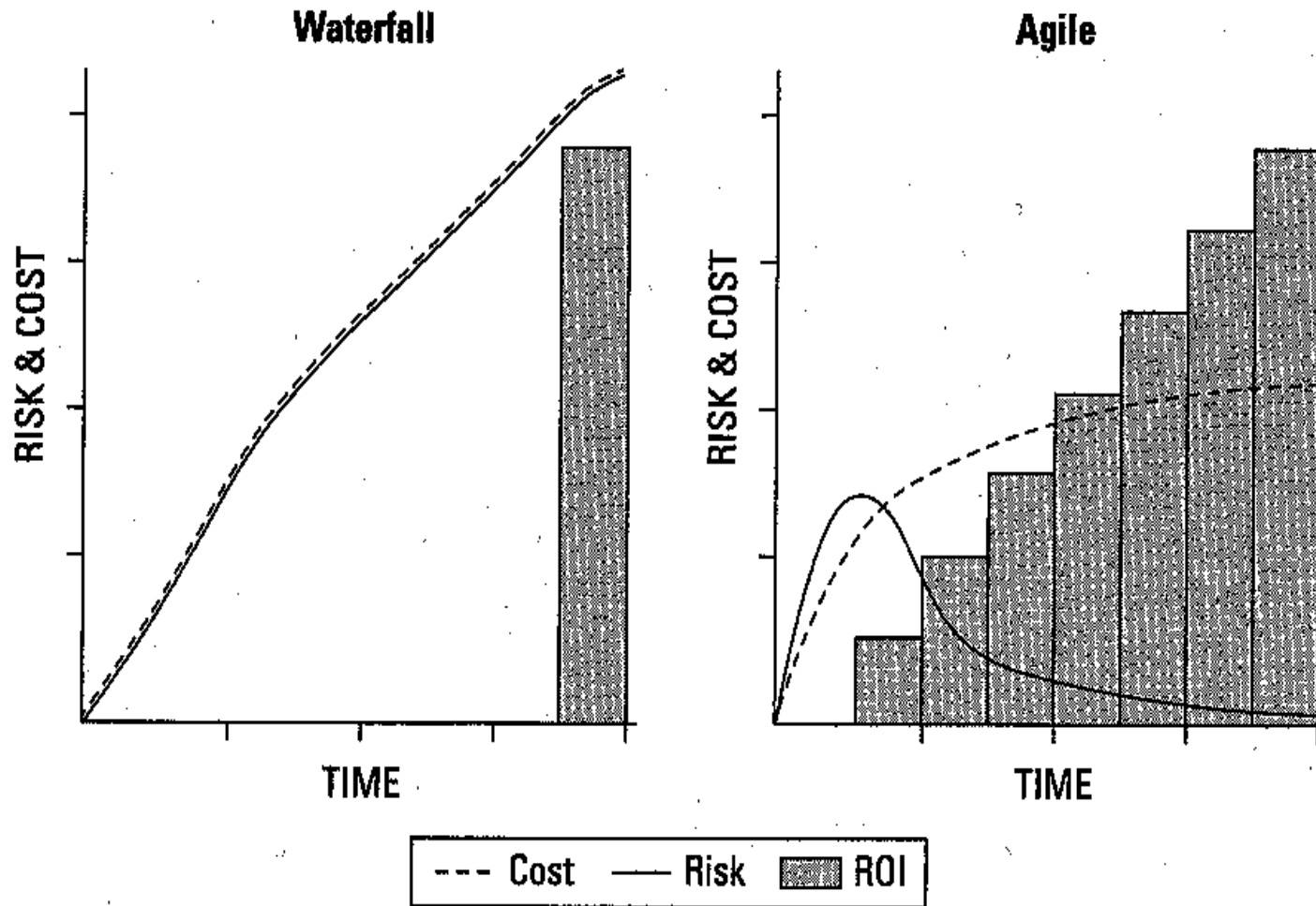


\*NASPO Modular Procurement: a Primer

Public Procurement Beyond Scope: A Primer on the Opportunities/ Challenges of Agile Procurement



\* Agile Project management for dummies, pg 15



\* Agile Project management for dummies, pg 57

# Public Procurements Norms and the challenge of Agile Procurement

# Traditional Components of a Successful Procurement

Scope represents all of the responsibilities of the vendor and describes exactly what is to be delivered.

All decisions are documented in case questions are asked later about choices and so the vendor can be accountable to all communications and documented content

Vendors are successful if they follow the plan and deliver only what is prescribed. Deviations from the plan are at best change notices and at worst scope creep that may unbalance the competitive process.

Procurement has a process or a tool for everything to generate compliant contracts. This includes never allowing any one vendor to define scope and communicating to all vendors when you communicate.

# Cultural shifts for Agile Procurement

- ▶ Collaboration over Contracts
  - ▶ Complex requirements cannot be fully identified at the beginning, so focus instead on continuous collaboration with suppliers to solve problems
- ▶ Individuals and Interactions over Processes
  - ▶ The process should be a means to an end, not the end in itself, so focus instead on the people and the communication between them
- ▶ Responding to Change over Following a Plan
  - ▶ Outcomes-based challenges give more flexibility than traditional requirements-driven procurements, where specificity prevents adaptation and innovation
- ▶ Working Solutions over Detailed Specifications
  - ▶ Instead of evaluating suppliers on their ability to write a proposal, focus on the strength and demonstration of their innovation, prototypes, or proofs of concept.

# Cultural shifts required for agile to be successful

**Shift 1: From contract-centered to project-centered**

**Shift 2: The vendor doesn't run the project, the agency does**

**Shift 3: You aren't just buying a service or finished product, you are entering a relationship**

**Shift 4: From "lump sum, fixed price" to incremental pricing or other models**

**Shift 5: From contract management to performance monitoring**

- Deloitte Insights

# Cultural barriers to implementing AGILE

If we don't prescribe the whole scope - how can vendors compete on equal footing?

Is it possible to establish a legitimate government purpose for not scoping a project in complete detail?

If we require a company to have Agile experience, aren't we artificially limiting the vendor pool?

If we don't have specific scope to hold vendors to how do we avoid scope creep?

If changes to scope no longer create change notices, how can the vendor price the project? Aren't we going to pay for all the risk inherent in indefinite scope?

How do we explain this to project customers and procurement oversight entities in our organizations?



# Pricing Models

- ▶ Time and materials - With no restrictions, this may be like a blank check to the vendor
- ▶ Fixed Fee - This has the opposite problem of time and materials. In this case fixed price without limits to the government's changes puts the vendor at risk. Vendors will include this risk in pricing, and the fixed price model may not accommodate scope changes.
- ▶ Small Chunks Fixed Fee - Breaking the project into micro-engagements may create a huge turnover in vendors and may defeat the efficiencies of agile by requiring considerable additional procurements.
- ▶ Min/Max bounded - fixed or time and materials methodologies that eliminate risks by bounding the variable components with minimums and maximums. This will limit agility but may be a good intermediary step.
- ▶ Points -based - the approach actually manages how much work will be required for each sprint or story in an agile procurement. This model will take work for purchasing agents to adjust to and is internally consistent and arbitrary at the same time. This model can be used with or without a confidence interval. This also requires a shared understanding of how points are defined and evaluated between government and vendors.

# Scope Creep

- ▶ The underlying public policy against scope creep is so that all vendors knew what to expect during the solicitation, and so that no vendor got access to work without competition
  - ▶ It's not scope creep if you're changing something before the team starts thinking about the details. This is why detailed planning in an agile project is after award.
  - ▶ It's not scope creep if it doesn't create additional work for anyone
  - ▶ It's not scope creep if it's within the budget for unknowns ( IDIQ)
  - ▶ It's not scope creep if the delivered product is exactly what stakeholders need at release time, and the code quality is as specified.
  - ▶ It is scope creep to switch big things for small things
- ▶ Complicated downstream technical issues may require the project owner to make a tradeoff between features or between future project iterations in order to complete required functions
- ▶ In agile, each new cycle has its own requirements discovery process so new requirements can be included without being considered a change or scope creep.

# Documentation and Transparency

- ▶ Traditional Methodologies require large amounts of documentation. This holds all vendors to the same design and understanding, while meeting the public's requirement for transparency. How can we determine the bid was not rigged without documenting all of our decisions and all of our contacts with vendors?
- ▶ Technology Procurements require documentation for defect tracking, customization tracking for future upgrades, and system documentation for future integration or use by future development vendors and teams
- ▶ The goal in Agile should be to find the right balance between documentation and discussion. Documentation is an important part of every system, Agile or otherwise, but comprehensive documentation as such does not ensure project success. In fact, it may increase your chance of failure.
- ▶ Agile documentation focuses on these characteristics:
  - ▶ *Essential*: Document with just barely good enough detail.
  - ▶ *Valuable*: Document only when we actually need it, not when we want it.
  - ▶ *Timely*: Documentation should be done in a just-in-time (JIT) manner, when we need it.

# Agile Public Procurement Case Studies

# Case study examples

- NYS OGS PBITS and Umbrella IT contracts
- Guelph Civic Accelerator
- Canada's Open Government Portal
- Startup In Residence
- Province of British Columbia
- Philadelphia's FastFWD
- US General Services Administration's 18F
- BC Developer Exchange .
- Arizona State Best Value Model
- Dalhousie University's experimentation with the approach
- UK Ministry of Defense
- US Department of Veteran Affairs
- FBI
- Queensland Australia
- UK MET office
- State of Nebraska CIO
- State of Washington
- State of California CIO
- State of Minnesota CIO

# Presentation References

# Resources

- ▶ Emilio Franco - Professor of Public Sector Procurement at Algonquin College and the Director of Electronic Procurement at Public Services and Procurement Canada.
- ▶ NASPO Modular Procurement - A Primer
- ▶ NASPO Agile Procurement in Practice (webinar)
- ▶ Agile in Government - Deloitte Center for Government Insights
- ▶ <https://www.knowledgehut.com/blog/agile/agile-contracts-of-work-must-haves>
- ▶ <https://www2.deloitte.com/insights/us/en/industry/public-sector/agile-in-government-procurement-mindset.html>
- ▶ <https://medium.com/@EricHysen/lessons-learned-from-the-governments-biggest-attempt-to-fix-tech-procurement-bd2265421211>
- ▶ <https://www.lean-agile-procurement.com/lean-agile-procurement-approach/#the-lap-approach-overview>
- ▶ <https://modularcontracting.18f.gov/agile-development/>
- ▶ <https://18f.gsa.gov/2015/12/29/is-your-project-using-agilefall/>
- ▶ Agile Project Management for Government, Brian Wernham
- ▶ Agile Project Management for Dummies, Mark Layton/Steven Ostermiller
- ▶ PMI Agile Practice Guide
- ▶ NASCIO Agile IT Delivery: Imperatives for Government Success

# Questions?