



Serving
GOVERNMENT,
serving
CANADIANS.

Au service du
GOUVERNEMENT,
au service des
CANADIENS.

AGILE PROCUREMENT

Levent Ozmutlu, Syed Hasan and Jonathan Vinet
STAMS, Procurement Branch, PSPC

CIPMM National Workshop

June 6, 2019

Overview of this Seminar – Part One

- What is Agile?
 - Myths and Facts
- Some Agile Concepts
- Agile Procurement
 - Definition
 - Agile Procurement Approaches
 - Comparison between Traditional and Agile Procurements
 - Agile Projects
 - Next Steps
- Question Period

Overview of this Seminar – Part Two

- Discussion Panel
- Introduction of Panelists
- Brief summary of Agile Procurements
 - Treasury Board Secretariat (TBS) Next Generation Human Resources and Pay (NextGen HR and Pay) solution (Phoenix replacement)
 - TBS Open by default Pilots (Usability & Accessibility)
 - Transport Canada (TC) Enhanced Maritime Situational Awareness (EMSA) Agile Request for Proposal



What is Agile?

Agile is a **mindset** which translates into a project management style focusing on:

- Early delivery of business value
- Continuous improvement of project deliverables and processes
 - A **production-ready solution** is always available for delivery
- Scope flexibility
- Delivery of well-tested, working solutions
- Input from a multi-faceted project team

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.

Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Kent Beck
Mike Beedle
Arie van Bennekum
Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith
Andrew Hunt
Ron Jeffries
Jon Kern
Brian Marick

Robert C. Martin
Steve Mellor
Ken Schwaber
Jeff Sutherland
Dave Thomas

© 2001, the above authors. This declaration may be freely copied in any form, but only in its entirety, through this notice.



Principles behind the Agile Manifesto

We follow these principles:

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

Source: agilemanifesto.org



Agile: Myths vs. Facts



Myth 1: Agile is Fast

FACT:

Adopting an Agile Methodology **may not always accelerate the final delivery and acceptance of the goods and services.** Agile allows you to learn faster through experimentation and have better outcomes.

Industry is able to see and comment on draft documents earlier in the procurement process, which helps Canada realign and reassess the requirements and procurement strategy to reduce the level of risk and chance of failure of the project.

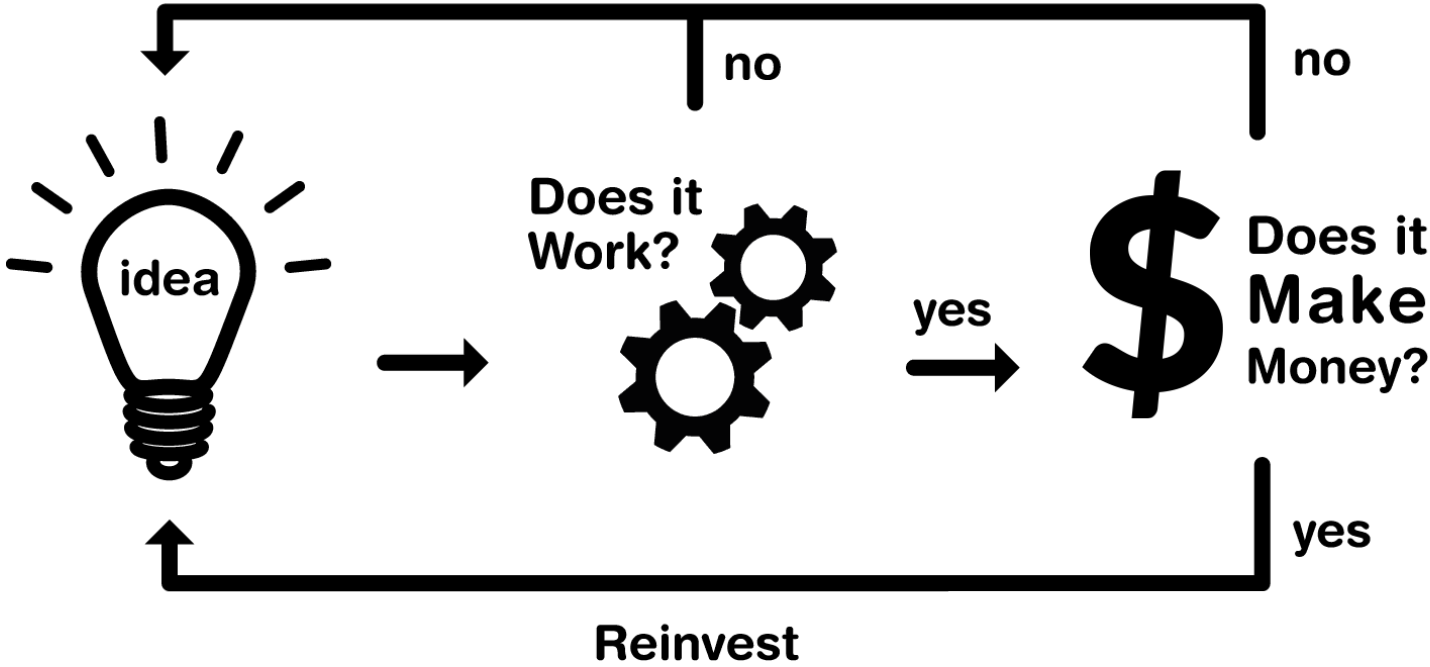


https://c2.staticflickr.com/8/7343/27482691351_6a99d8c0f3_b.jpg

Iterative

Fail Fast, Fail Often

The Simplest Business Plan



Source: Tobias Anheluk (11 Oct 2017), <https://www.knowledgehut.com/blog/project-management/fail-fast-a-case-study-of-agile-correcting-on-the-go-for-project-success>

Myth 2: Agile Removes the Need to Plan

FACT: Planning is still essential, and in fact, needs to be done more often and regularly, instead of just at the beginning of a project.



https://cdn-images-1.medium.com/max/1600/1*CJDaKlpCc5RHauVwZ5TM7A.gif



Myth 3: Agile Removes Risk

FACT: Agile involves effective risk management throughout a project.

“Sailing from San Diego to Hawaii (just point at 252 degrees and sail for 14 days, right?)”

Source: Daniel Gullo, The Definitive ScrumMaster® (CSM) Workbook, 2019

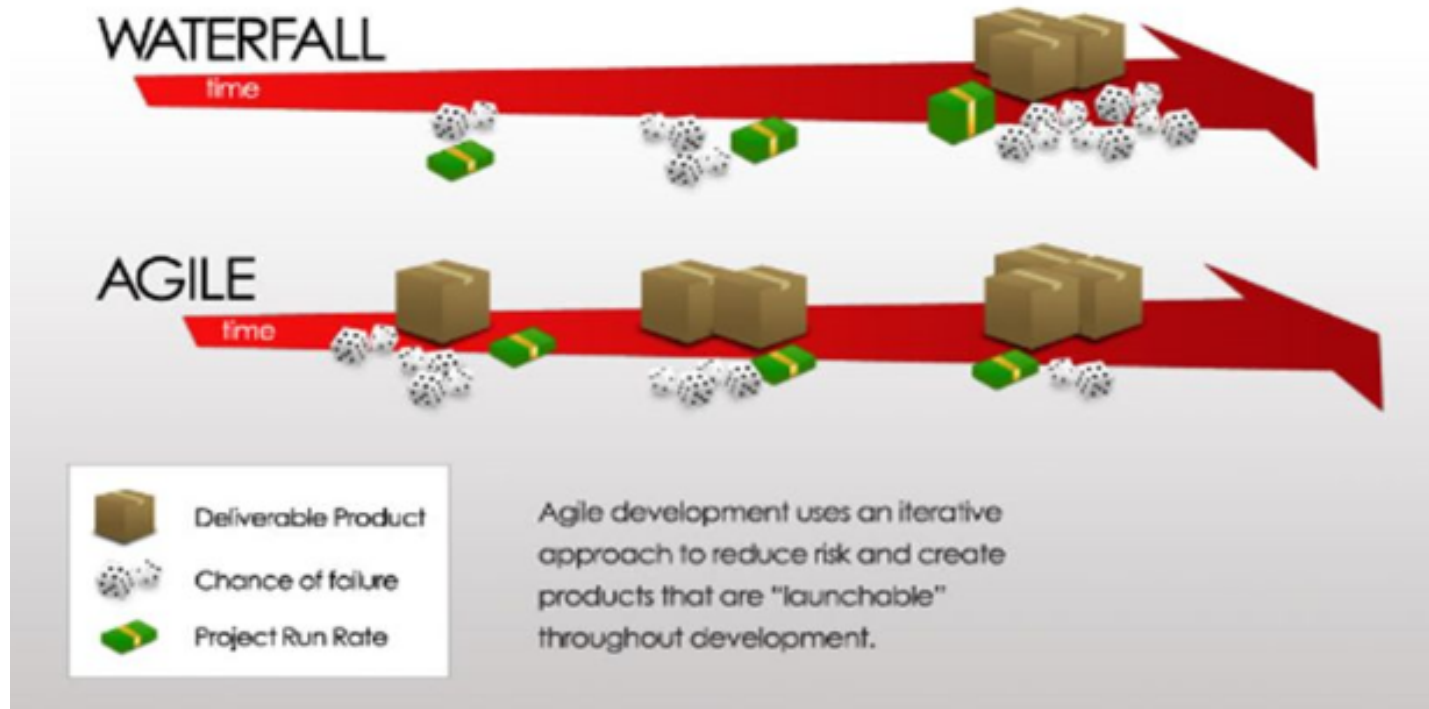


https://c1.staticflickr.com/1/68/210703201_e2f9c2eb2a_b.jpg



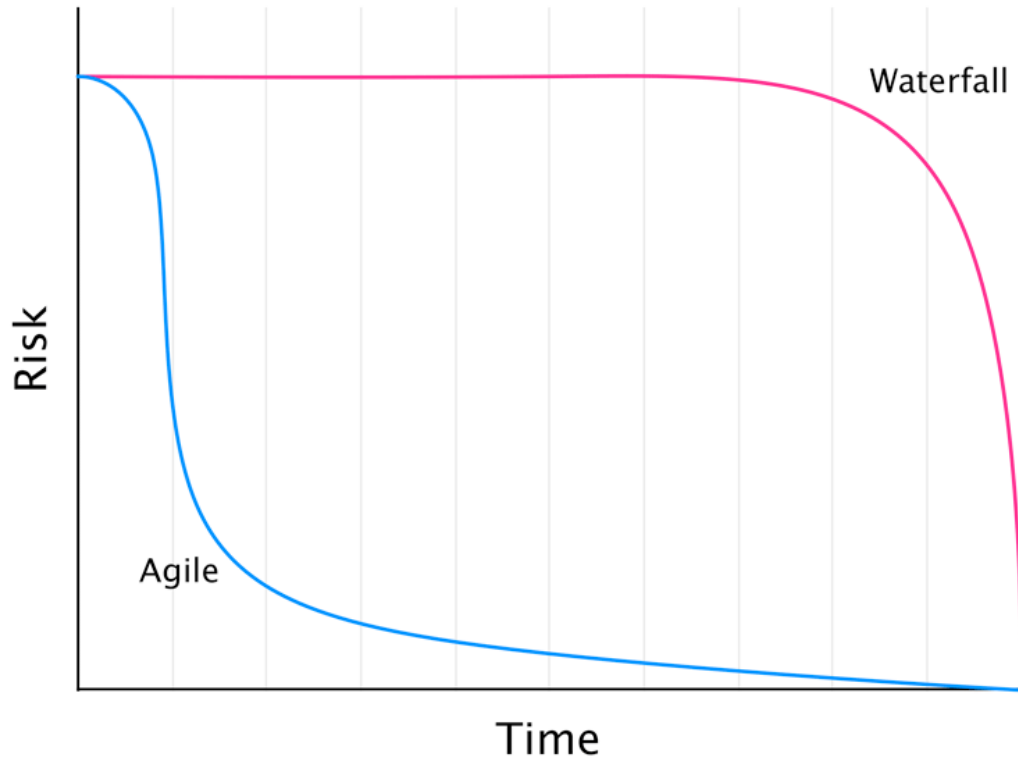
Waterfall vs Agile Software Development

DEVELOPMENT: AGILE VS WATERFALL
where the risk lies



http://logicboost.com/images/agilevswaterfall_full.jpg

Risk – Agile vs. Waterfall



https://cdn-images-1.medium.com/max/1600/1*rKITj2s4O_ot3rAqQAq3Sg.png

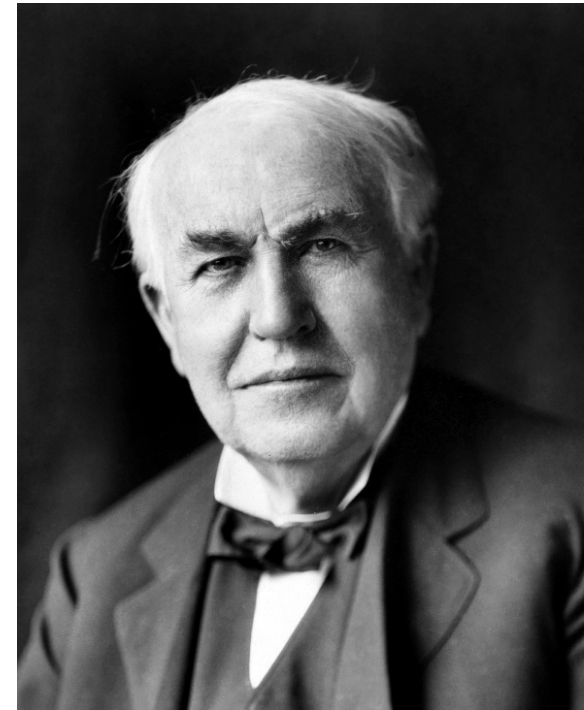


Myth 4: Agile Prevents Failure

FACT: Being Agile means failing sooner, with earlier course correction and incremental successes.

“I never once failed at making a light bulb. I just found out 99 ways not to make one.”

Thomas Edison



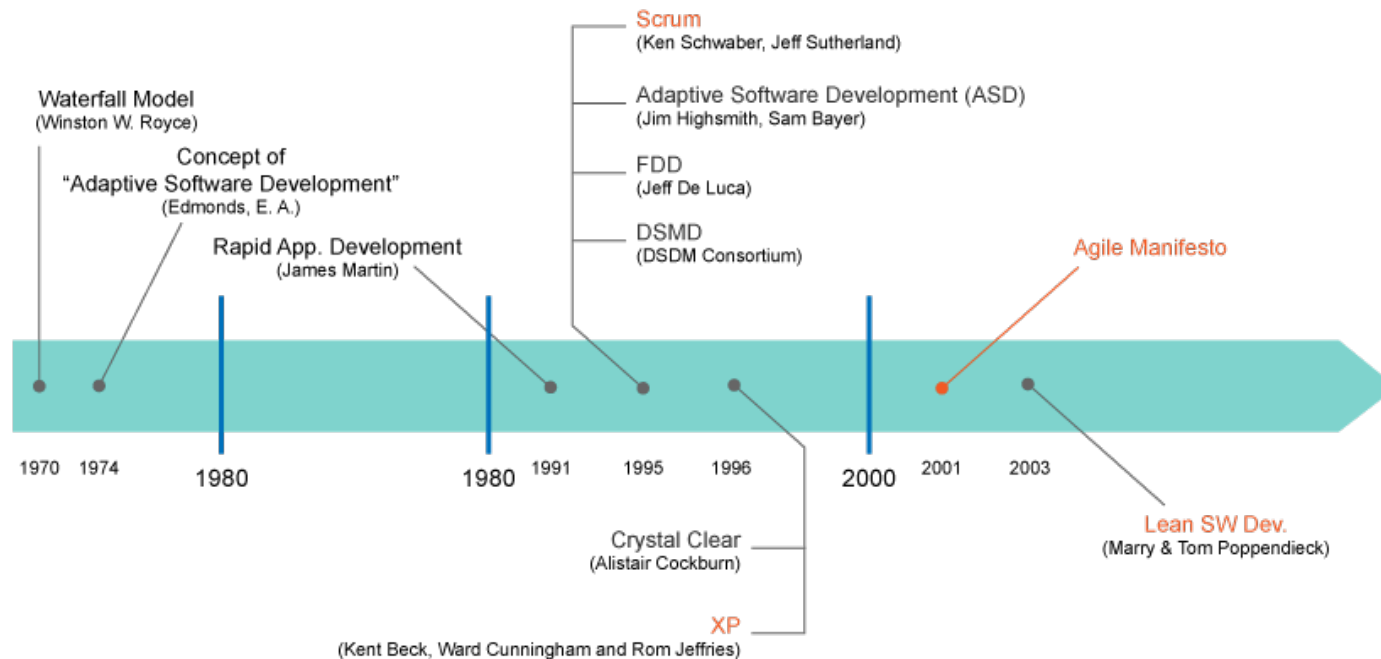
https://upload.wikimedia.org/wikipedia/commons/4/40/Thomas_Edison2-crop.jpg



Myth 5: Agile is New

FACT: Agile has been around for decades, but is it new to the federal government?

History of Agile



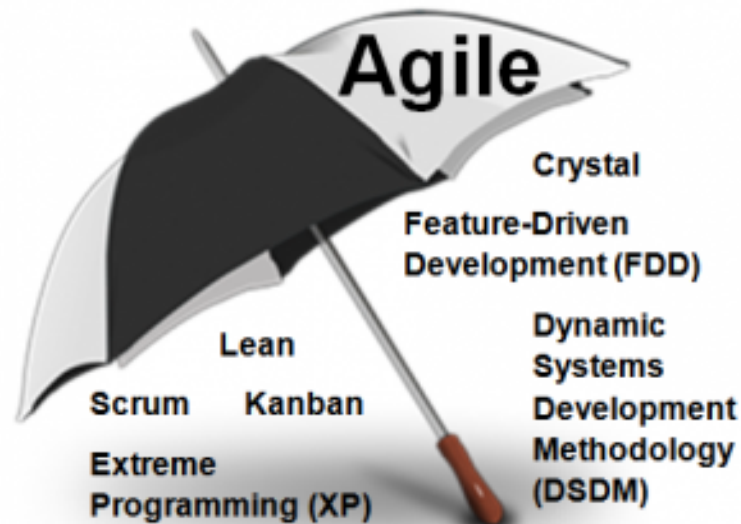
<https://cdn.visual-paradigm.com/solutions/agile-software-development/agile-timeline.png>



Some Agile Concepts



Under the Umbrella of Agile



www.leadingagile.com

<https://tapchilaptrinh.vn/wp-content/uploads/2013/09/agile-umbrella.png>

Plus: Scaled Agile Framework (SAFe)

Mainly software programming!

The Evolution of Agile

Agile was by inspired by:

- Kaizen (Japan after WWII)
- Toyota Production System (1948 onwards, Muda, Mura, Mudi)
- Six Sigma (Motorola, 1980 onwards)



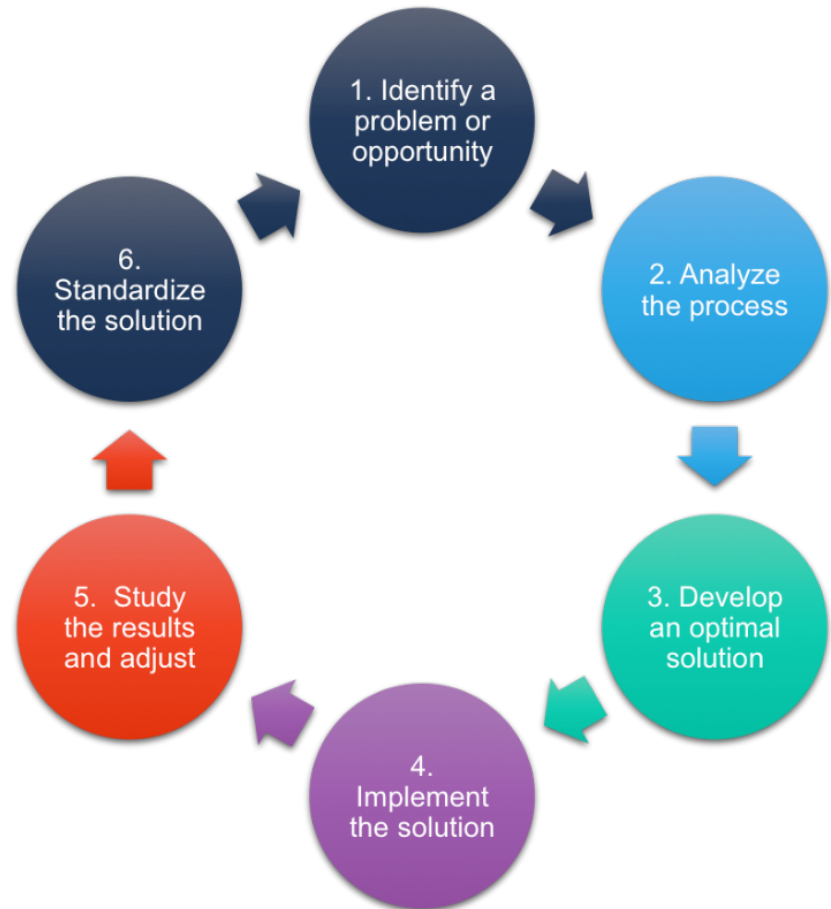
https://www.managementexchange.com/sites/default/files/styles/large/public/Six-Sigma-Process%20Improvement_pg?tok=ves-LH9



Kaizen

Kaizen means “continuous improvement” in Japanese.

It is about teams making small, incremental improvements that lead to dramatic, positive change.



<https://theleanway.net/what-is-continuous-improvement>



Muda, Mura, Muri (Toyota Production System)



Muri = overburdened



Mura = unevenness, fluctuation, variation



Muda = waste



No Muri, Mura, or Muda

http://leanvalley.eu/wp-content/uploads/2010/03/muda_mura_muri.gif



What have we been experimenting with?

So far, PSPC has been experimenting with Scrum-like processes.

Scrum is a process framework where teams establish a hypothesis of how they think something works, try it out, reflect on the experience, and then make the appropriate adjustments.

PSPC is looking at expanding its Agile approaches.



What is Agile Procurement?




PSPC AP Definition of Agile Procurement

In order for a Government of Canada IT procurement to be considered agile, the following four factors should be present:

- **Iterative** approach for deliverables, allowing for off ramps and pivots (using small, time-defined and iterative work packages, with mechanisms built into the procurement to adjust or terminate if project stops demonstrating value)
- Procurement is focused on **outcomes**, allowing for a range of solutions to be proposed (selection methodology drives towards the best solution, not a pre-determined one, using high-level evaluation criteria so as to assess dissimilar proposals)
- **Cross-functional teams** are involved in designing and running the procurement (procurement, program managers and technical experts are involved throughout)
- **Collaborative approach** with suppliers (iterative process allows government and suppliers to have a collaborative dialogue on needs and outcomes)

Innovation – Pushing the Limits

 The image cannot be displayed. Your computer may not have enough memory to open the image, or the image may have been corrupted. Restart your computer, and then open the file again. If the red x still appears, you may have to delete the image and then insert it again.

http://pngimg.com/uploads/steve_jobs/steve_jobs_PNG33430.png

“Some people say, "Give the customers what they want." But that's not my approach. Our job is to figure out what they're going to want before they do.

I think Henry Ford once said, "If I'd asked customers what they wanted, they would have told me, 'A faster horse!'"

People don't know what they want until you show it to them.”

Steve Jobs

Being Agile throughout the Procurement Process

From the beginning, implement:

- Collaborative Teams (dedicated staff); Prioritization of Business Value Documents; Incremental Sprints; Risk Management; Frequent Assessments of Deliverables; Rapid Exchange of Information

During the Solicitation/Evaluation Periods:

- Provide business value documents early for industry or draft documents in advance, for discussion and feedback
- Allow for multi-phase builds that include prototyping
- Allow for bidder demos

For the Contract:

- Build agile project management process into SoW (i.e., highlight early value deliveries and collaborative work structure, etc.)
- Award multiple contracts with go/no-go decision points based on performance (Bake-Offs)



Agile Procurement Approaches

Many approaches to agile procurement:

- **Challenge Based** – Where suppliers respond with innovative solutions to public sector problems (ISC / IDEaS / BCIP / R&D procurement by PSPC)
- **Multi-phase:** Where contracts are awarded to multiple suppliers to develop a preliminary solution (proof-of-concept or prototype), and then the contract with the best preliminary solution is amended to add the development and delivery of a production-ready solution (Artificial Intelligence CSPA REP)
- **Tasked-Based** – Where some or all work under the contract(s) is performed on an “as and when requested basis”. (NextGen HR and Pay)
- **Negotiated RFPs** – Where final details are clarified and negotiated with suppliers before the award (R&D procurement PSPC)

Traditional “Waterfall” Procurement

Agile Procurement

Detailed technical requirements with high specificity and low flexibility



Challenged-based requirements with more flexibility

Lengthy proposals with extensive details



More concise proposals

Evaluated on ability to write



Evaluated on strength and demonstration of innovation and approaches

Lengthy evaluations due to extensive technical requirements



Evaluations can be completed more quickly (weeks vs. months)

Long contract periods



Shorter contract periods with Go/No Go decision points

No negotiation before contract award



Contract negotiation before contract award

Contracts reward high levels of effort



Contracts reward delivery

Failure after considerable investment



Earlier, less expensive failure

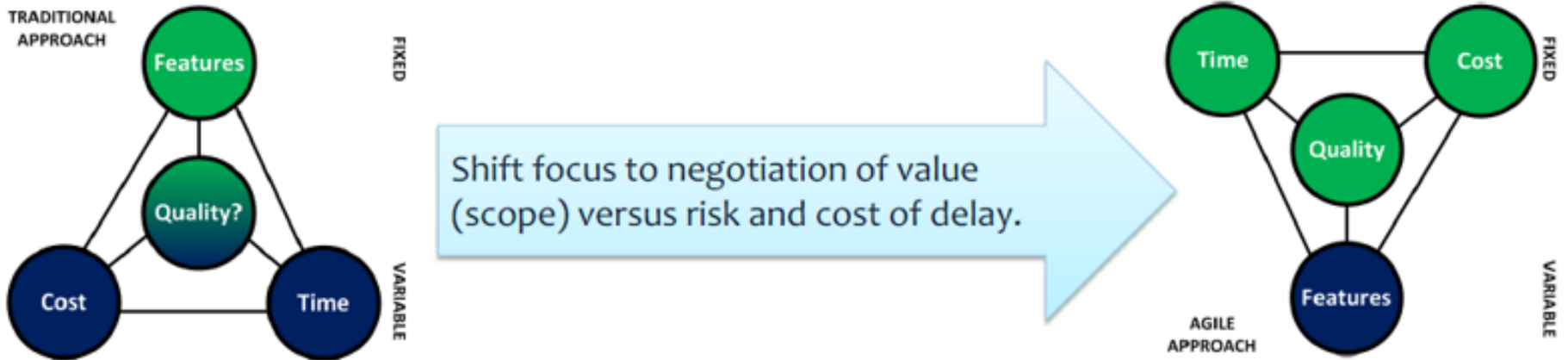
Distributed Effort



Resource Intensive (Many FTEs involved/dedicated to project.)



Project Management Triangle: Traditional vs. Agile

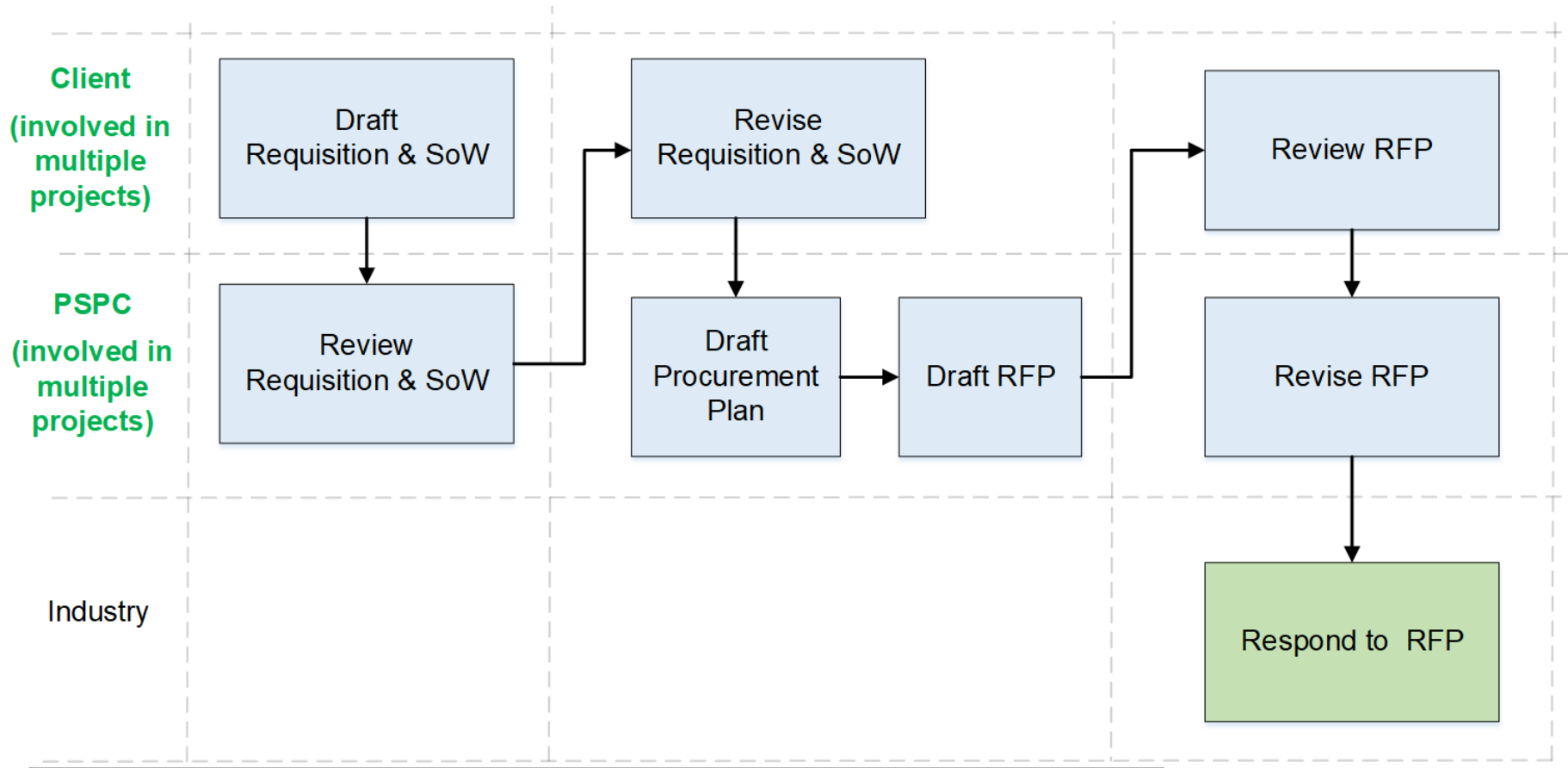


<http://bad.tools/wiki/wp-content/uploads/2018/04/Agile-Finance-Triangle.png>



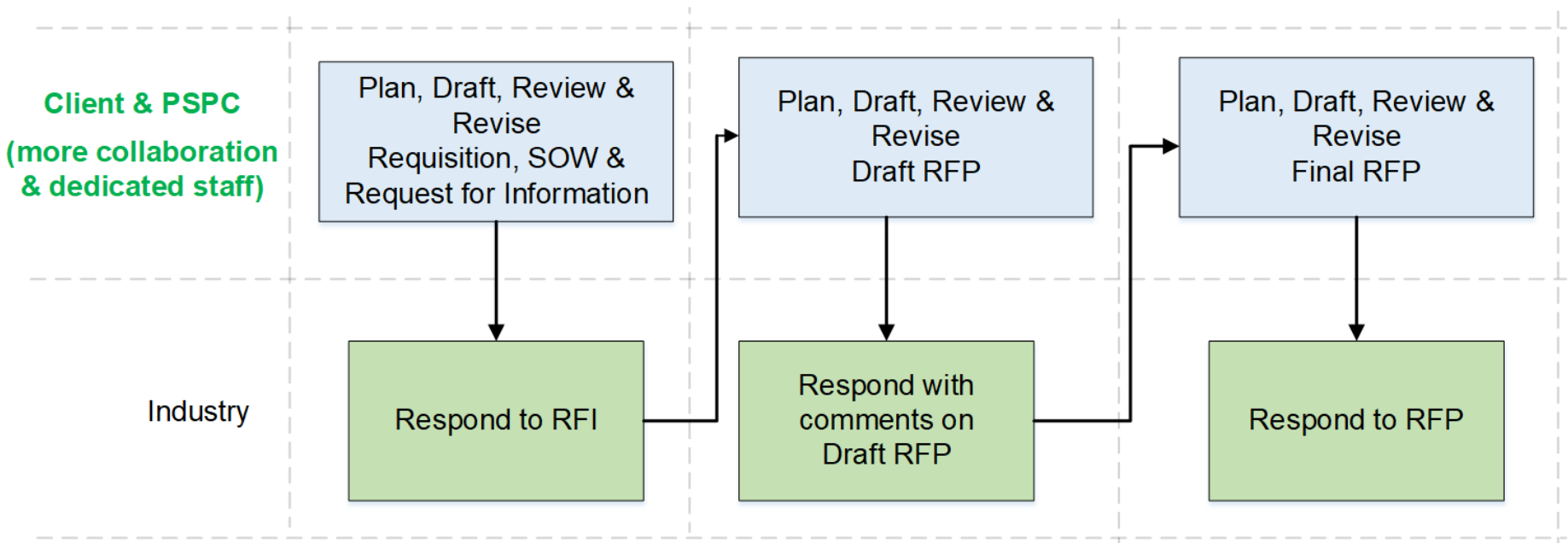
Example of a Traditional Waterfall Procurement Process

Simplified View



Example of an Agile Procurement Process

Simplified View



Failure: A Critical Success Factor!

- We need to accept risk and failure.
- We can learn from our failures.
 - Are we documenting them so we can share them?
- Our clients want us to be more innovative and flexible.
- Senior management wants effective risk management.

The Research and Development Approach



<http://1.bp.blogspot.com/-297qzoGaeS4/TIT-FrJseKI/AAAAAAAAANw/CHPDn4h3hIU/s1600/Jordan.jpg>

“I can accept failure, everyone fails at something. But I can’t accept not trying.”



The image cannot be displayed. Your computer may not have enough memory to open the image, or the image may have been corrupted. Restart your computer, and the file again. If the red x still appears, you may have to delete the image and then insert it again.

“You miss 100% of the shots you don’t take.”

http://pngimg.com/uploads/hockey/hockey_PNG68.png



Considerations

- We are being innovative and testing new approaches – Not all will be successful but others will be.
 - Failure is an option that we learn from and course correct (as required).
- Agile tends to introduce higher level evaluations, something that has been avoided in the past due to concerns regarding risk and defensibility when challenged.
- Agile procurement is resource intensive. Cross-functional teams with full-time, dedicated resources are essential.
- Having experts in multifunctional evaluation teams is critical.
- Traditional procurement still has its place under stable markets with defined products and services.

Next Steps

- PSPC is continuing to experiment with Agile procurement practices e.g. Modular Contracting
- PSPC Acquisitions to obtain additional Agile training
- PSPC to build an Agile Procurement Framework
- Start building a functional Agile Toolkit
- Engage with TBS, client departments and industry on the Agile Toolkit
- PSPC intends to build a working group to share knowledge and discuss Agile projects and processes



Resources

- Levent Ozmutlu, Senior Director, Innovation Procurement Directorate, STAMS
- Syed Hasan, Manager – Innovative Procurement Methodologies (IPM), STAMS
- Jonathan Vinet, Manager – Innovation Procurement Directorate, STAMS
- Heather Wilson, Supply Team Leader – IPM, STAMS
- Veronica Nazareth, Procurement Policy Advisor – IPM, STAMS

TPSGC.AgileInitiative.PWGSC@tpsgc-pwgsc.gc.ca

Questions



https://www.juku.it/wp-content/uploads/2016/04/cloud_question_mark.jpeg



Panel Discussion

- Jonathan Vinet (Discussion Chair)
- April Campbell (Enhanced Maritime Situational Awareness)
- Mario Godard (NextGen HR and Pay)
- Heather Wilson (TBS Agile projects)
- Syed Hasan (Gateway/AI Project)
- Levent Ozmutlu (Senior Director, Innovation Procurement)



Agile Projects

| Project Name | Status | Value | Process |
|--|-------------|------------------------------|---|
| Usability of TBS “Open by Default” Portal | Completed | \$75K | <ul style="list-style-type: none"> - Mandatory & Subjective Rated Requirements - Bidders’ Demonstrations - Contract Award |
| Call for Proposal for Two Challenges - Accessibility of: (1) TBS Open by Default Portal (2) PSC Recruitment Platform | Failed | \$350K - TBS \$145K - PSC | <ul style="list-style-type: none"> - Mandatory & Subjective Rated Requirements - Contract award for up to 3 Prototypes (\$15K, 3 wks) for each Challenge - Prototype Demonstrations - Exercise option (\$305K TBS & \$100K PSC) |
| TC – Enhanced Maritime Situational Awareness (EMSA) | Awarded | \$3.5M | <ul style="list-style-type: none"> - Mandatory & Subjective Rated Requirements - Usability test evaluation - Contract Award |
| Artificial Intelligence Project – CSPA Regulatory Evaluation Framework | In progress | \$620K | <ul style="list-style-type: none"> - Mandatory & Subjective Rated Requirements - Up to 3 Contracts to be awarded for Prototypes (\$150K each, 3 months) - Prototype Demonstration - Exercise option for final solution (\$170K) |



Agile Projects (continued)

| Project Name | Status | Value | Process |
|-----------------------------|-------------|-------|---|
| NextGen HR and Pay Solution | In progress | \$TBD | <ul style="list-style-type: none"> - Industry Day with industry, union members, public servants - ITQ Gate #1: Assess bidders against Mandatory Evaluation (7 bids received, 5 responsive) - ITQ Gate #2: Rated Subjective Evaluation with 5 responsive bidders, top 3 recommended to move to RFP Gate #3 - RFP Gate #3: Sent to top 3 bidders; evaluation to be done against additional mandatory criteria. Up to 3 contracts will be awarded with further competition(s) occurring via Task Authorization Bid Request(s) process. |

