

# (W1) ALIGNING PROJECTS WITH AGILE APPROACH

Tuesday, April 21, 2015 | 8:00 – 11:30 am | Seaport World Trade Center | Boston, MA

## Workshop Instructor:

*Gurpreet Kanwar, Senior Project Manager, Information Management, NAV CANADA*

This workshop can help you understand how to adapt Agile Development in your organization. It provides guidance on using agile approach for selected projects and also using hybrid model. We can run any project through Agile. It helps in faster delivery of the project with satisfied client. This workshop will give insight into the adaptation of Agile for organization and identify the required processes, artefacts and training necessary to roll out Agile. You will learn how to quickly adapt agile, which projects are better suited for Agile and a timeline to align project methodology for Agile.

## Agenda at a Glance:

### 8:00 am Welcome Remarks

#### 8:05 Part 1: Aligning Projects to Agile

Brief Description on Agile  
Why Organizations are looking for Agile  
What's in for Stakeholders  
Which Organizations can easily adapt  
Agile & Matrix Organization  
Processes, Artifacts & Training

### 9:35 Coffee Break

#### 9:50 Part 2: Selecting Agile Projects

Taking one Project as an example  
Identify the approach with Selected Project  
Identify the Strategies at their end  
Discuss the issues and problems

#### 10:35 Part 3: Project Selection Exercise

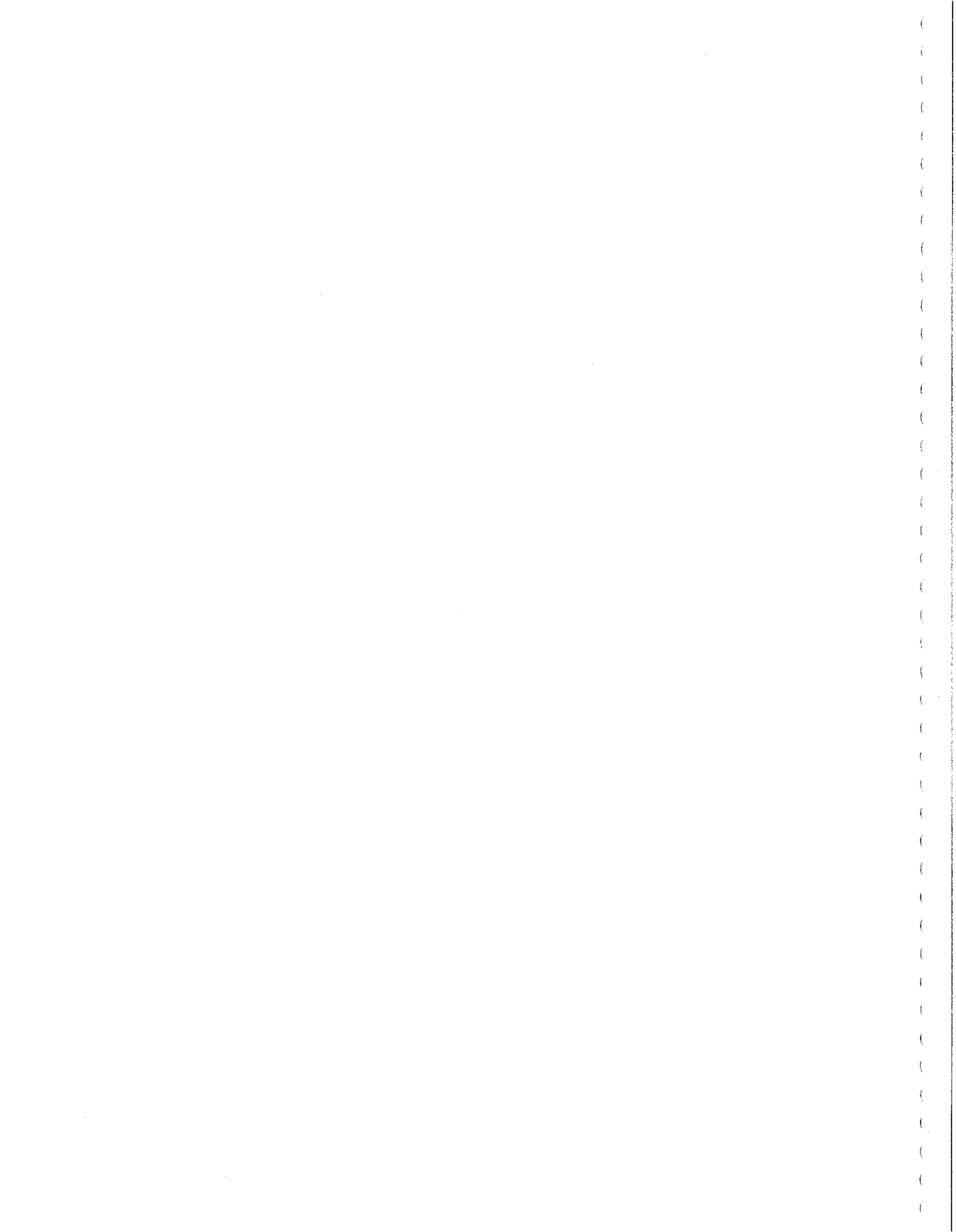
Attendees to perform exercise in group  
Exercise guides the team on understanding Agile for projects  
What if the Strategy changes in midst?  
Resource allocation to projects

#### 11:15 Q&A and Session Wrap-up

Closing Comments  
Key takeaways

Part of:

**Bio-IT World**  
CONFERENCE & EXPO '15



# Aligning Projects with Agile Approach

April 21<sup>st</sup>, 2015

## Agenda

8:00 am Organizer's Welcome and Chairperson's Opening Comments

**8:05 Part 1: Aligning Projects to Agile**

1. Brief Description on Agile
2. Why Organizations are looking for Agile
3. What's in for Stakeholders
4. Which Organizations can easily adapt
5. Agile & Matrix Organization
6. Processes, Artifacts & Training

9:35 Refreshment Break

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2. Identify the approach with Selected Project
3. Identify the Strategies at their end
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2. Exercise guides the team on understanding Agile for projects
3. What if the Strategy changes in midst?
4. Resource allocation to projects

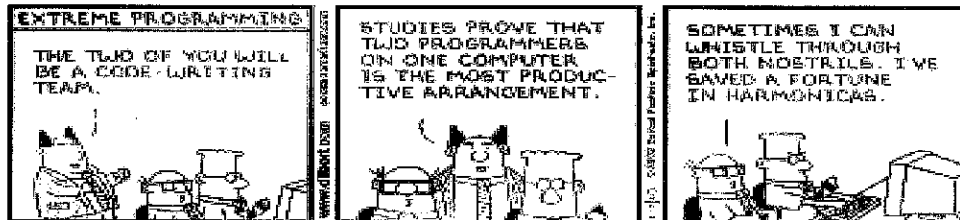
**11:15 Q&A and Session Wrap-up**

1. Closing Comments
2. Key takeaways

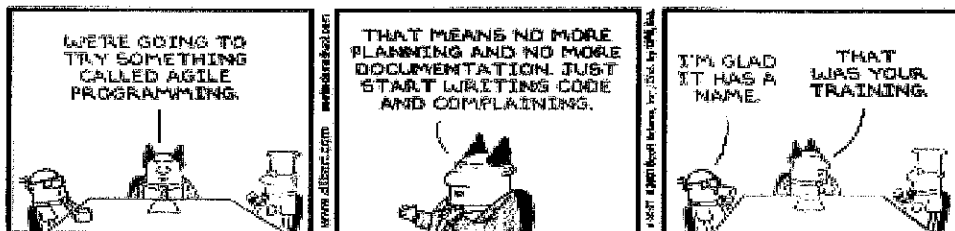
11:30 End of workshop

## About Myself?

- Working in IT Industry Since 1993
- Worked as Portfolio Manager and Project Manager
- Worked at India, United Kingdom, US & Canada
- MBA Degree from Edinburgh Business School
- Engineering degree from Pune University, India



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## What is Agile?

1. Agile is an iterative software development methodology that promotes open collaboration and process adaptability through the life-cycle of the project
  - Is beneficial on projects with many unknowns
  - Scrum is a framework within Agile methodology
2. What characterizes the Agile process?
  - Collaboration and communication
  - High level of participation and transparency with the client
  - Team is self-organized, where everyone participates in decision making
  - Development is planned in stages by team members
  - Testing and documentation are done as you go
  - Client sees working product sooner

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## Brief Description on Agile

*The purpose of this initiative is to understand the issues and concern on adoption of Agile as a project methodology and identify the required processes, artifacts and training necessary to roll out Agile to the any organization*

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The **Agile Software Development Methodology** has become very vogue.

If you're not doing it, you are probably being told you should be!

Development leaders are jumping on the *Agile* bandwagon in droves based on the promise of success; shorter timelines, higher productivity, and greater client satisfaction – but are they really getting everything that has been promised?

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## Agile Benefits

### Anticipated Benefits:

1. Agile promises increased client confidence by improving productivity, quality, and client satisfaction
2. Agile promises happier confident developers by giving them more autonomy; diversity; and lightweight loads leading to increased employee engagement through empowerment
3. Better communication with more face to face
4. Improved requirements and frequent delivery on requirements
5. Improved usability
6. Agile promises a faster return on investment through *shorter cycles*

# Agile Benefits

## Anticipated Benefits:

- Agile promises increased client confidence by improving productivity; quality, and client satisfaction
  - How may you agree with this benefit?
  - Project example where client confidence decreased or increased with the Agile approach

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## Agile Benefits

### Anticipated Benefits:

- Agile promises happier confident developers by giving them more autonomy; diversity; and lightweight loads leading to increased employee engagement through empowerment
  - Discuss with the audience on various project at their ends
  - Provide Project example

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## Agile Benefits

### Anticipated Benefits:

- Better communication with more face to face
  - Do you agree?
  - My Example

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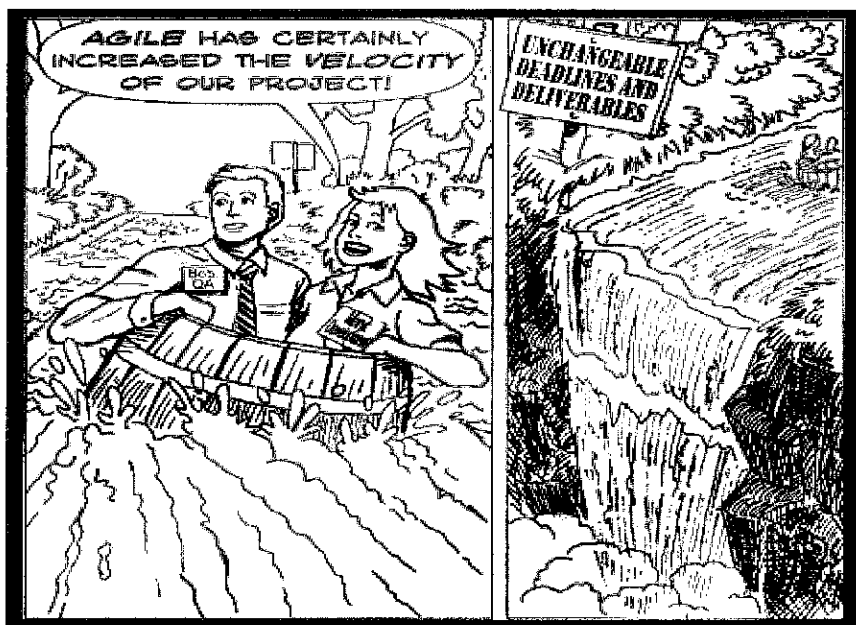


## Agile Benefits

### Anticipated Benefits:

- Improved requirements and frequent delivery on requirements
- Improved usability
- Agile promises a faster return on investment through *shorter cycles*
  - Discussion on various examples

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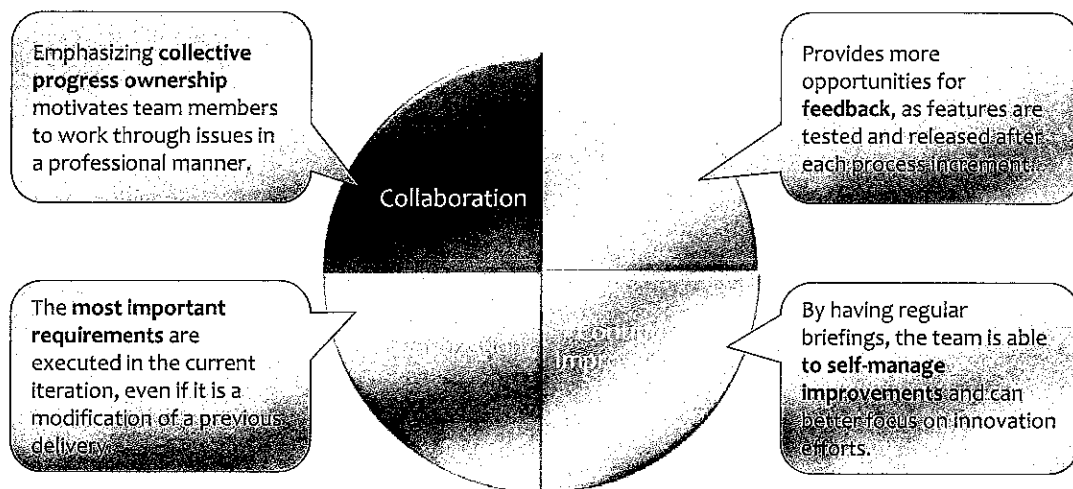


Agility is the ability to adapt and respond to change ... agile organisations view change as an opportunity, not a threat. - Jim Highsmith

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## Embrace Agile to reduce churn and effectively react to change in requirements

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**Agile facilitates change and allows the development team to change direction every iteration. The cost of change is low and it provides an opportunity for the customer to reassess the features for inclusion in the current iteration based on value and business ROI.**

## Agile vs. Waterfall

### Pros

Quick start, incremental releases and regular customer reviews and feedback.

Evolution of requirements over time.

Ability to respond to change quickly.

Less rework, achieved through continual testing and customer involvement.

Real-time communication among the development team and customer.

### Cons

Can be misinterpreted as unplanned or undisciplined.

Needs a high-quality, customer facing development team.

Needs a high-level of customer involvement.

Lack of long-term detailed plans.

Produces a lower level but necessary documentation.

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## Waterfall ..

### Advantages

Planned & Recorded Process

Clear Expectation on delivery

Strong Documentation

### Disadvantages

Emphasis on Requirements Gathering

Change Management

Emphases on Periodic Testing Cycle

Focused on Clients but...

Long Term perceived value

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## So When Waterfall?


1. Clear picture of final deliverable.
2. When definition, not speed, is key to success.
3. Client engagement is minimal

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## When Agile?

1. Time to market frequency of release
2. Scope is not fully determined
3. Research projects
4. No Clear picture
5. Skilled developers are adaptable to change
6. Changing industry
7. Fully engaged clients

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Both the Agile and Waterfall methodologies have their strengths and weaknesses.  
We will explore as we move forward with presentation

1. Projects
2. Organizations
3. Team & Skills.

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- 
- What type of organization do you have?

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- 
1. What is the structure of organization
    - Management preferences
    - Business Units
    - Matrix
    - Project based
  2. Are your business units able to react quickly with fast development cycles and seize competitive opportunities?

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## **What is a Successful Organization?**

1. Core Business
2. Leadership
3. Communication
4. Continuous learning
5. Respect
6. Environment & Adaptation

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## **What is a Successful Project?**

1. Schedule
2. Budget
3. Satisfied Team
4. Well Defined Business Objectives
5. Quality
6. Stakeholders
7. Executive Support

## **8. Business Value**

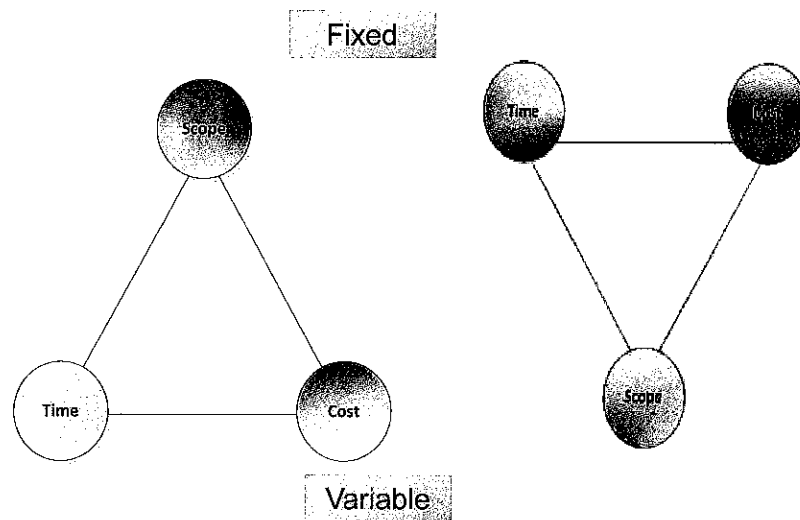
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## **How to make a project successful?** **Source: McKinsey.com**

1. Standardized Technology
2. Qualified Team
3. Reliable Project Management Practices
4. Focusing on managing strategy and stakeholders instead of exclusively concentrating on budget and scheduling
5. Mastering technology and project content by securing critical internal and external talent
6. Building effective teams by aligning their incentives with the overall goals of projects
7. Excelling at core project-management practices, such as short delivery cycles and rigorous quality checks

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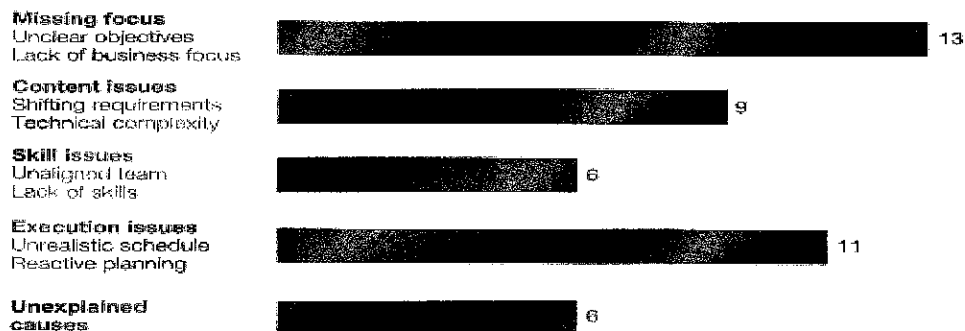
## Triangle Metric



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## Why projects fail?

Rough distribution by cause of the 45% of IT projects that experience cost overruns (for those with budgets >\$15 million in 2010 dollars), %




IT projects with budgets >\$15 million

Cost overrun, 45%      Schedule overrun, 7%      Benefits shortfall, -56%

Source: McKinsey-Oxford study on reference-class forecasting for IT projects

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How can agile help?

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### **What will be different?**

1. Prioritize projects by business value
2. Identify projects suitable for Agile process
3. Split longer projects into shorter sprints
4. Change requests will be added to the Product Backlog, prioritized and estimated
5. Project Value is done as the builds are released, realizing profit all the way along rather than at the end of the project

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## How to Setup Agile in your organizations?

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### Establish an Agile rollout plan

Use a systematic and choreographed rollout strategy for a smooth Agile implementation.




Step 1 Readiness	Step 2 Pilot	Step 3 Implement	Step 4 Measure	Step 5 Rollout
Determine what may be preventing you from reaching your desired Agile state in your organization.	<p>Pick the right pilot project with the appropriate duration, complexity, ownership, and importance.</p> <p>The pilot can be used to develop a proof of concept for wider Agile rollout.</p>	<p>Start your Agile implementation by instituting scrum processes with selected pilot.</p> <p>Document the tasks that you were able to complete and note any blockers and complications.</p> <p>Establish the processes and documents</p>	<p>Track the appropriate metrics to validate the pilot as proof of concept.</p> <p>Understand your sprint velocity and effort overhead to improve project predictability and task completion rates.</p>	<p>Rollout Agile on a broader scale using lessons learned.</p> <p>Choose one of several methods for spreading Agile development throughout the organization.</p>

## Agile Team Structure

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### Establish the Scrum roles and responsibilities

There are three distinct roles. We are not constrained to these roles; however, ensure these key responsibilities are accommodated.

 Product Owner	 The Team	 Scrum Master (PM)
<ul style="list-style-type: none"><li>• <b>Responsible</b> for identifying the product features and their importance in the final project.</li><li>• <b>Responsible</b> for refining and reprioritizing the list to decide, based on importance, which features will be delivered in the next sprint.</li><li>• <b>Accountable</b> for maximizing ROI through choosing when and what features to deliver.</li><li>• <b>Consulted</b> by the team based on collaboration, rather than contract negotiation.</li><li>• Remains <b>informed</b> on the progress of the current sprint.</li></ul>	<ul style="list-style-type: none"><li>• <b>Responsible</b> for creating the final product.</li><li>• <b>Responsible</b> for self-managing. There is no project manager assigning tasks to each team member.</li><li>• <b>Accountable</b> for ensuring high quality deliverables for the Product Owner.</li><li>• <b>Consulted</b> by the Scrum Master and Product Owner during sprint planning to determine level of effort.</li><li>• <b>Informed</b> on direction of the business and current priorities.</li></ul>	<ul style="list-style-type: none"><li>• <b>Responsible</b> for escalation of blockers and risks.</li><li>• <b>Responsible</b> for leading scrums and retrospectives.</li><li>• <b>Responsible</b> for team building and resolution of team conflict.</li><li>• <b>Accountable</b> for ensuring quality of communication and deliveries during development.</li><li>• <b>Consulted</b> by Product Owner on resolution of risks.</li><li>• <b>Consulted</b> by the team on suggestions for improvement.</li><li>• <b>Informed</b> by the team on work completed during the current sprint.</li></ul>

## Co-locate your team for performance & results

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## Guided Implementation points in the Agile Implementation project

### 1: Assess the Readiness of Your Organization

Assess your organization's readiness: identify if your organization's team, management, technology, and culture is prepared to transition to Agile. Info-Tech analysts will help you interpret your gaps and propose ways to fill these gaps.

### 2: Choose the Right Pilot Project

Select an appropriate pilot project: identify a pilot project to gauge the implications of Agile on your team and organization based on complexity, duration, importance, and ownership. Info-Tech analysts will help you find the project that will garner the most benefits and lessons.

### 3: Rollout Your Agile Pilot

Begin to see the benefits and challenges of Agile: prepare and execute sprint sessions for your selected pilot project and track its progress with KPIs and metrics. Info-Tech analysts will discuss your experiences and techniques to help alleviate unexpected pain points.

### 4: Prepare for a Wider Rollout

Build a proof of concept for a wider rollout: take the lessons learned to amend your Agile process to fit an organization-wide implementation. Info-Tech analysts will discuss approaches to improve your Agile strategy to include different teams and projects within your organization.

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## Management support for Agile

- Changing to Agile can be perceived by management as loss of control however it brings the benefits of improved communication, responsiveness, and cost containment.

### Agile Management Team

#### Provide Constant Support

Rather than dictating timelines and scope, management will now support the team by helping to prioritize scope and resolving conflicting requirements amongst themselves.

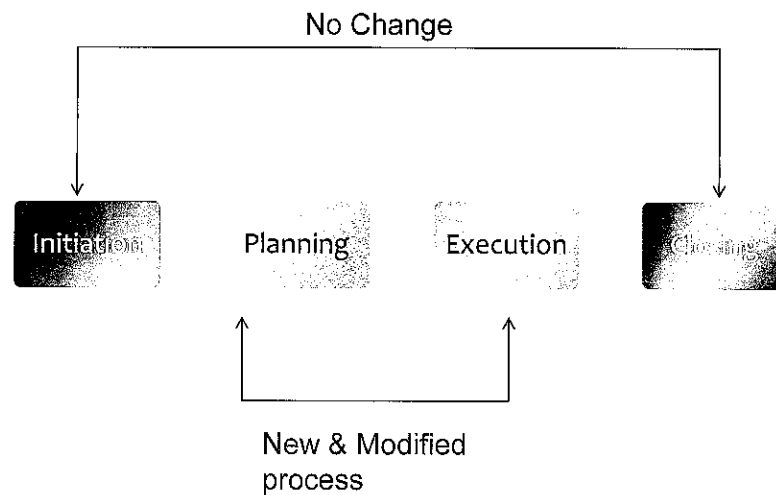
#### Take a Hands-Off Approach

Once the scope is determined for a given iteration, management will not inject new requirements until the current work is complete.

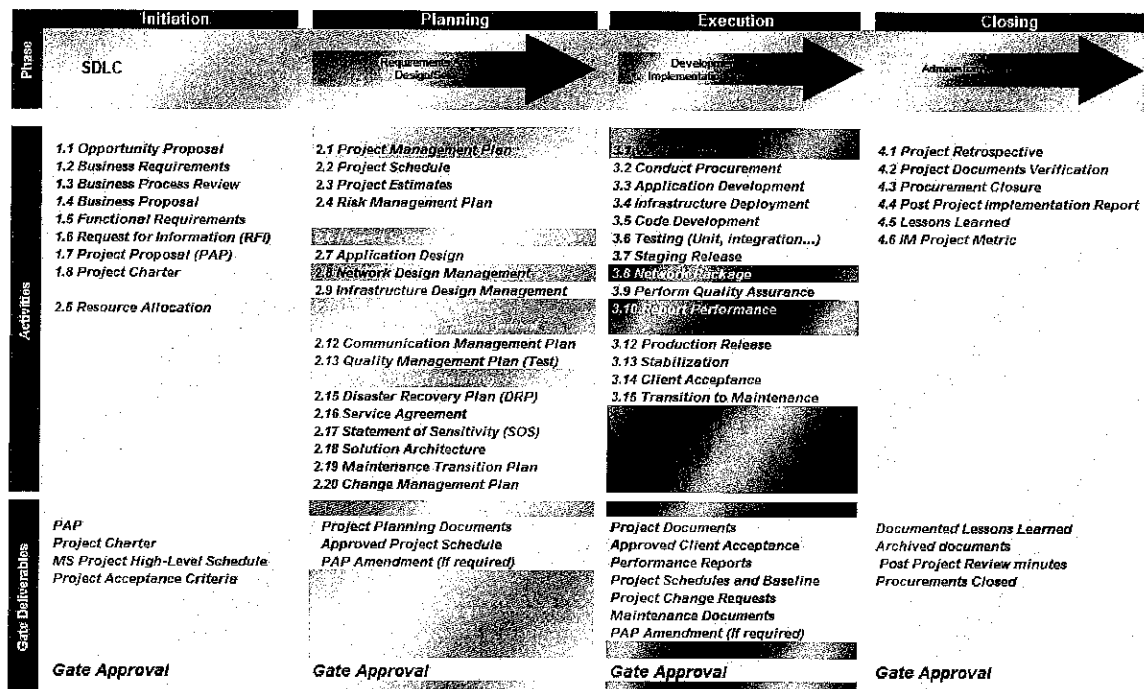
#### Be a Catalyst for Change

Management should encourage the move toward Agile as a means of increasing development transparency.

## Impact to current NAV Canada methodology



## Impact to current NAV Canada methodology



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## Project Risks

Risk	Likelihood	Impact	Risk Action
<b>Resources:</b> resources required for this initiative are in high demand	H	H	<b>Accept:</b> Project is lower priority
<b>Suitability for NAV:</b> Agile requires a cultural shift, empowerment and high client involvement to succeed.	M	H	<b>Mitigate:</b> secure commitment from IM Senior leadership team. Use as a project methodology where clients will sign up willingly to methodology. Conduct Organizational Readiness and assess Change Management effort for deployment.
<b>Cost:</b> Agile will consume significant management cycles to institutionalize.	M	H	<b>Mitigate:</b> pilot with a few small initiatives first. Build on success and roll out as appropriate.
<b>Red Tape:</b> Inability to reduce "red tape" due to organizational dependencies.	H	M-H	<b>Mitigate:</b> Projects would need to be structured with high-level requirements under a funding envelope e.g. project annuals to minimize the lag time for approvals.
<b>Resources:</b> ability to allow all hands on deck to address issues given constraints.	M-H	H	<b>Mitigate:</b> work with union to implement.
<b>Estimation:</b> ability to provide proper estimates on iterations	M-H	H	<b>Mitigate:</b> new estimation tool

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## Stakeholder Information

Stakeholder	Name	Concerns/Impact
Application Development		Development, Productivity, time for training
Business Clients		Client engagement, new methodology, time for training, need to balance multiple approaches
Portfolio		Higher perceived flexibility and throughput. Cost to train across teams.
Enterprise Performance Management		Development, Productivity, time for training
Enterprise Business Solutions		Opportunity cost to implement
Business Intelligence		Ability to impact Agile to BI
Security		Impact on Security Structure
Infrastructure		Ability to fully implement and be allowed to follow methodology
Clients		Welcome ability to regularly provide feedback and input. Concerned about required involvement.

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## Communication Strategy

*Communication will consist of SharePoint updates, Project Status Reports (PSR), Project Team meetings, Monthly Steering Committee and IM Project Review updates. Communication will be emailed to all indicated stakeholders.*

### **Bi- Weekly Status Reports**

Project Manager will generate a weekly project status report.

### **Bi-Weekly Team Meetings**

Project Manager will chair a weekly meeting of core and partner team members. The meeting will follow a published agenda listing key objectives, subjects to be covered and time allotment for each. Team members are required to bring any relevant material.

### **Weekly Project Schedule Updates**

The Project Manager is responsible for updating the project schedule weekly from team member input.

### **Monthly Steering Committees**

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# Change Management Strategy

The Change Management Strategy will focus on:

1. Assessing organizational readiness
2. Identifying and managing communication with key stakeholders to ensure the organization is ready to deploy Agile as a project methodology.
3. Ensure organizational readiness is in place prior to roll-out and skills gaps closed to ensure success

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## Selecting Agile Projects

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## SWOT Analysis for Projects

- SWOT is a strategic tool used to evaluate the strengths, weakness, opportunities and threats
- The SWOT analysis can be an important part of the any project :
  1. **Strengths:** attributes of the organisation that help achieve the project objective.
  2. **Weaknesses:** attributes of the organisation that stop achievement of the project objective.
  3. **Opportunities:** external conditions that help achieve the project objective.
  4. **Threats:** external conditions that could damage the project

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## Why SWOT?

1. Simple, Realistic & Timely
2. Create new strengths
3. Identify threats
4. Bring political & environment awareness

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## SWOT Approach for Agile project

<b>Strength</b> <ul style="list-style-type: none"><li>✓ New Adventure</li><li>✓ New Processes</li><li>✓ Skills</li></ul>	<ul style="list-style-type: none"><li>✓ Change Management</li><li>✓ Processes</li><li>✓ Budget</li><li>✓ Client Engagement</li></ul>
<b>Opportunities</b> <ul style="list-style-type: none"><li>✓ Innovation</li><li>✓ Change Management</li><li>✓ Technology</li><li>✓ New markets</li></ul>	<b>Threat</b> <ul style="list-style-type: none"><li>✓ Culture</li><li>✓ Management Control</li><li>✓ Political Influence</li></ul>

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## Agile Score Card

- The Scorecard is simply a list of criteria that can be matched against the characteristics of a particular project. There is also a score associated with each question. The intention is to simply tally up to scores and based on the total number, determine if the project is suitable for “the Agile treatment”
- Sample Scorecard

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## **Example - New Project (JBNP)**

- Description of Project – to be added

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## **Example - New Project (JBNP)**

- Proposed Methodology for Project JBNP

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## Example - New Project (JBNP)

- Strategies in front of the organization

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Group Exercise

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## Project Description


The Safety Information System (SIS) Program is being proposed to modernize and advance many safety related processes to improve the efficiency, access to information, analysis of data and collaboration of safety related data. The SIS program will advance use of safety related data and resolve material technology obsolescence issues associated with the current environment. The program is a multi-year program that will modernize and improve the multiple safety processes.

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## 20 minute Exercise

- What will you propose to the Organization?
  1. Agile Methodology
  2. Waterfall Methodology
- Why did you made that decision?

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## Discussion

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## Summary

The Agile method will bring an iterative approach to projects, where requirements and solutions evolve through collaboration among customers and development teams. Clients will be part of the team from very start of the project to identify the significant benefits.

Based on selection of project

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## Result

- Project was proposed with .....

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## Are we ready for Agile?

We can adopt the Agile on certain projects but not on all of them. It will bring changes in Management role and more accountability on team, and if we are worried about making mistakes in front of customers, this method may not be for us. Project where requirements need to be defined and analyzed accurately can use a middle approach with separate phase for requirements and multiple streams for releases

Agile will bring

- |                                |                              |
|--------------------------------|------------------------------|
| • Customer Satisfaction        | • Face-to-Face Communication |
| • Welcome Changes              | • Working Software           |
| • Frequent Delivery            | • Constant Pace              |
| • Collocated Teams             | • Self organization          |
| • Highly motivated Individuals |                              |

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## Agile has become synonymous with success ... but is it?

Going Agile is supposed to make things better, it is supposed to streamline your development efforts, it is supposed to make your clients happier, it is supposed to make your developers happier.

- ☐ IT leaders are feeling pressure to switch their software development methodology over to an Agile format.
- ☐ Agile development methods can provide benefits to your development process, but you need to try and implement correctly to avoid major problems.
- ☐ Agile development methods can potentially decrease your responsiveness, negatively impact developer morale, and lead to implementation of counter-productive practices.
- ☐ When implementing Agile methods, IT leaders must focus on incorporating agility in the development structure and not simply try to fit their organization into the Agile paradigm.
- ☐ This solution set provides the strategic advice you need to avoid pitfalls associated with Agile development and adapt the agility practices, that are the real source of benefits, into development teams, and drastically improve your responsiveness while maintaining a positive working environment.

Agile is not for every business. Agile is not for every project. Agile is not for every development team. Businesses need to stop trying to force this square peg into round holes .... It simply may not fit, and that's OK.

## Key takeaway

1. Agile promises many key benefits, but it is not for all projects.
2. Agile is a team oriented methodology and as such can raise a lot of people-oriented issues.
3. Agile require change in management thinking & style.
4. Team makes decisions
5. Client is part of team and make decisions right away
6. Slow adaptation of Agile with selection of Pilot project. Start Small
7. Agile is not for every organization