

# A Case Study: Experiences with Agile and Lean Principles

Jeff Davenport

Software Solutions Conference 2015

November 16–18, 2015



Software Engineering Institute

Carnegie Mellon University

© 2015 Carnegie Mellon University

Distribution Statement A: Approved for Public Release;  
Distribution is Unlimited



Copyright 2015 Carnegie Mellon University

This material is based upon work funded and supported by Software Engineering Institute under Contract No. FA8721-05-C-0003 with Carnegie Mellon University for the operation of the Software Engineering Institute, a federally funded research and development center sponsored by the United States Department of Defense.

NO WARRANTY. THIS CARNEGIE MELLON UNIVERSITY AND SOFTWARE ENGINEERING INSTITUTE MATERIAL IS FURNISHED ON AN “AS-IS” BASIS. CARNEGIE MELLON UNIVERSITY MAKES NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, AS TO ANY MATTER INCLUDING, BUT NOT LIMITED TO, WARRANTY OF FITNESS FOR PURPOSE OR MERCHANTABILITY, EXCLUSIVITY, OR RESULTS OBTAINED FROM USE OF THE MATERIAL. CARNEGIE MELLON UNIVERSITY DOES NOT MAKE ANY WARRANTY OF ANY KIND WITH RESPECT TO FREEDOM FROM PATENT, TRADEMARK, OR COPYRIGHT INFRINGEMENT.

[Distribution Statement A] This material has been approved for public release and unlimited distribution. Please see Copyright notice for non-US Government use and distribution.

This material may be reproduced in its entirety, without modification, and freely distributed in written or electronic form without requesting formal permission. Permission is required for any other use. Requests for permission should be directed to the Software Engineering Institute at [permission@sei.cmu.edu](mailto:permission@sei.cmu.edu).

DM-0003052



# Agenda



• Background

• Landscape

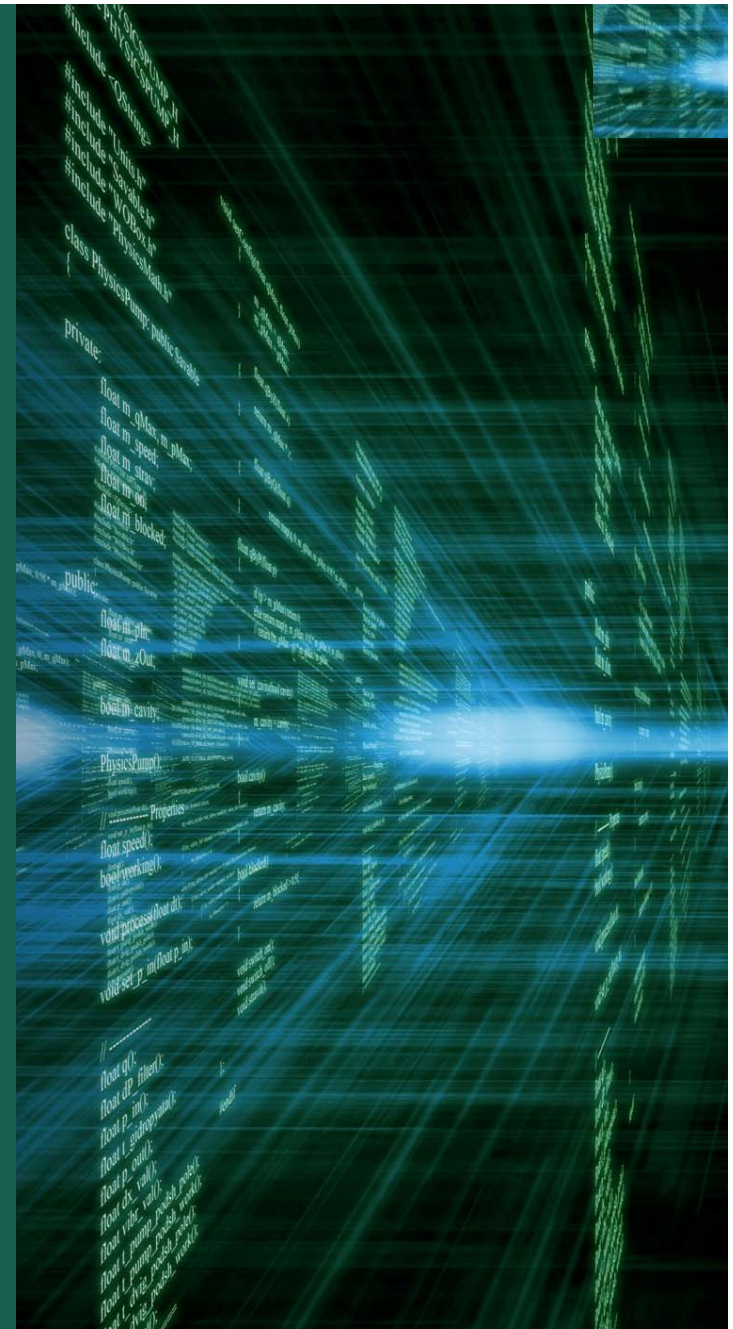
• Observations

• Conclusion



# A Case Study: Experiences with Agile and Lean Principles

## Background





# Critical Federal IT System

This case study tells the story of the development of a critical IT system within a department of the U.S. federal government.





# Agile and Lean Methods

This study focuses on the successes and challenges resulting from applying Agile and Lean methods in a government software development environment.





# Research

The study is based on interviews, observations, documentation, program guidance, and examination of work products.





# Sharing Experiences



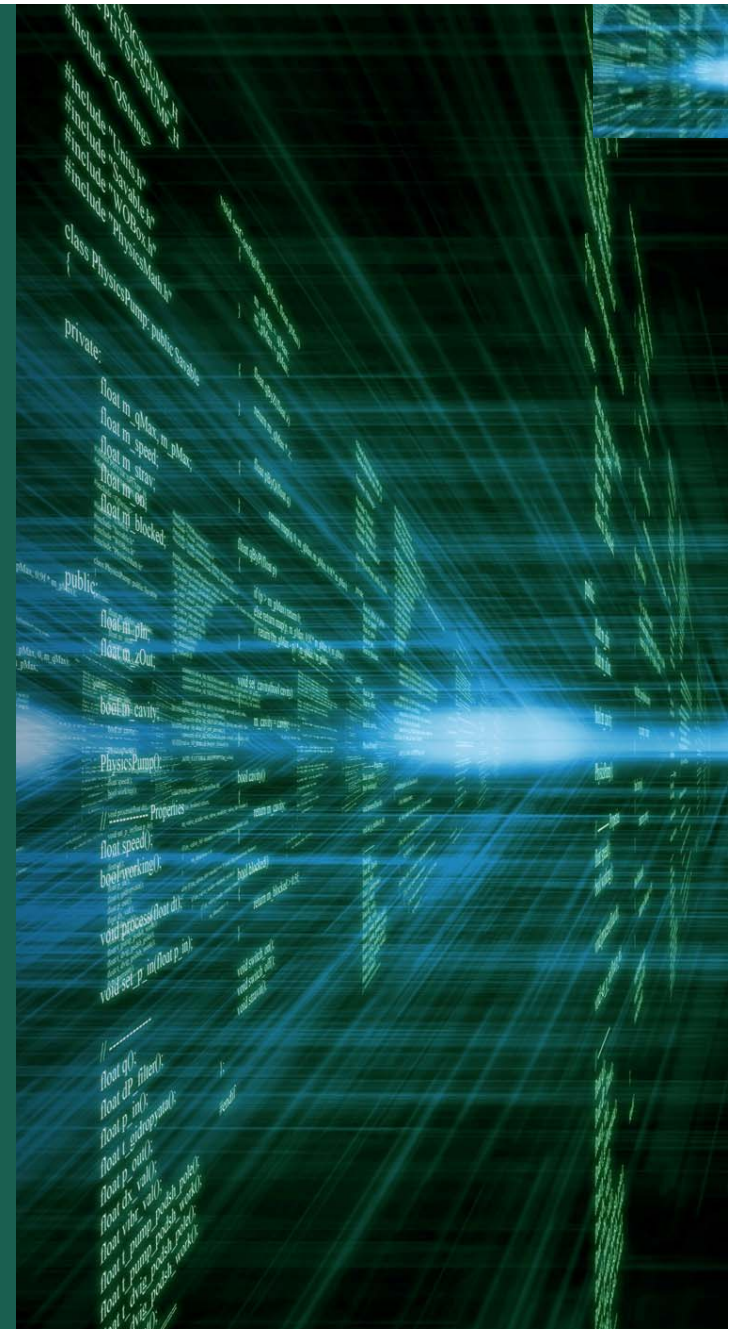
The case study is presented so that other government entities can benefit from the implementation experiences. Additionally, other types of entities may also benefit.



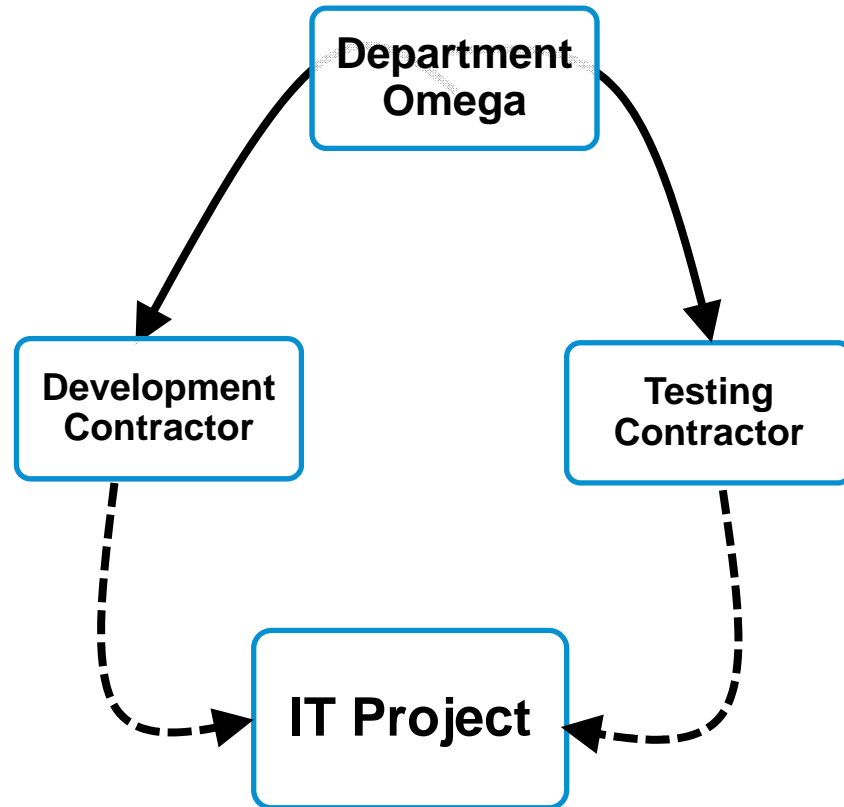


# A Case Study: Experiences with Agile and Lean Principles

## Landscape



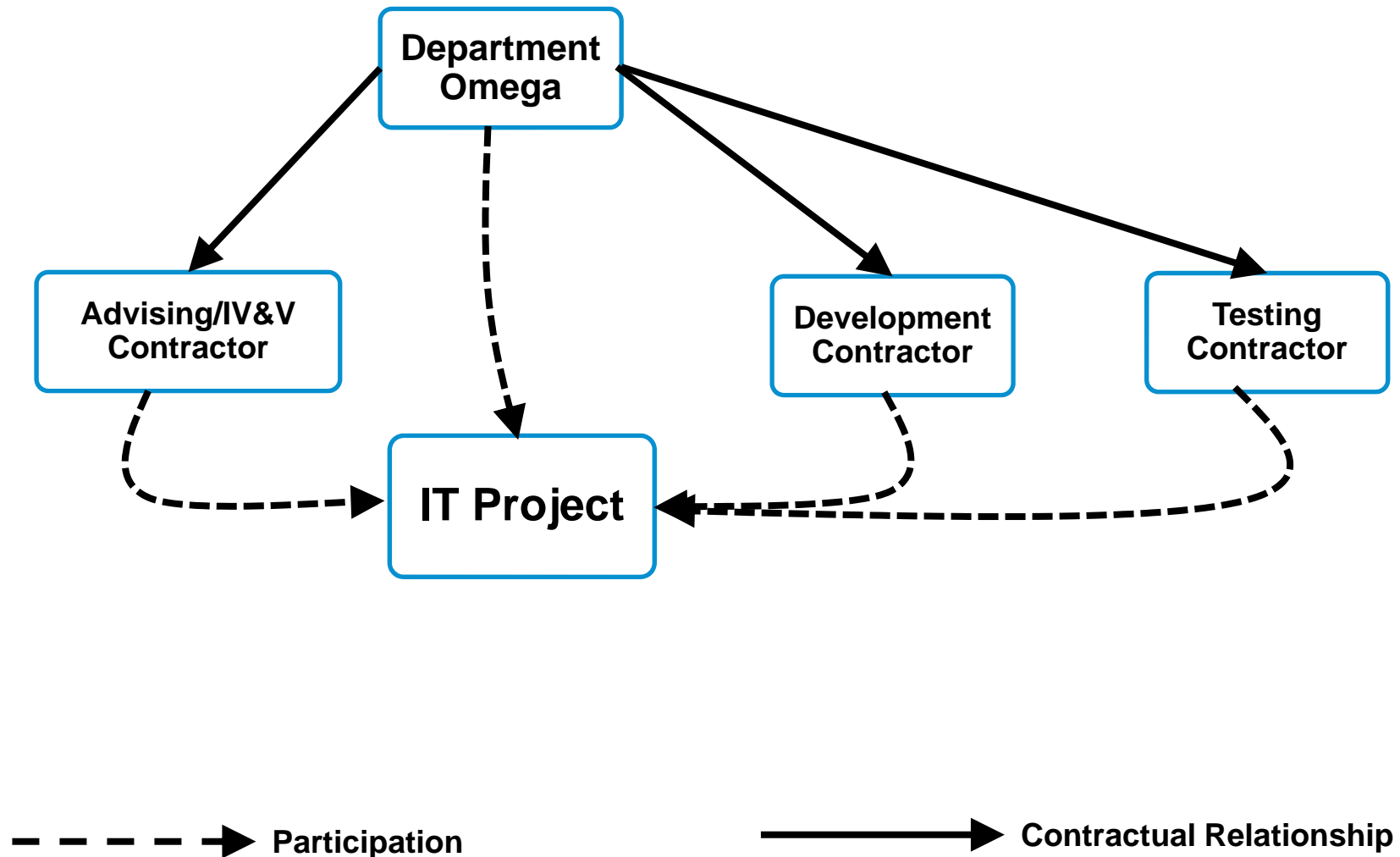
# Outsourcing Paradigm



- - - - -> Participation

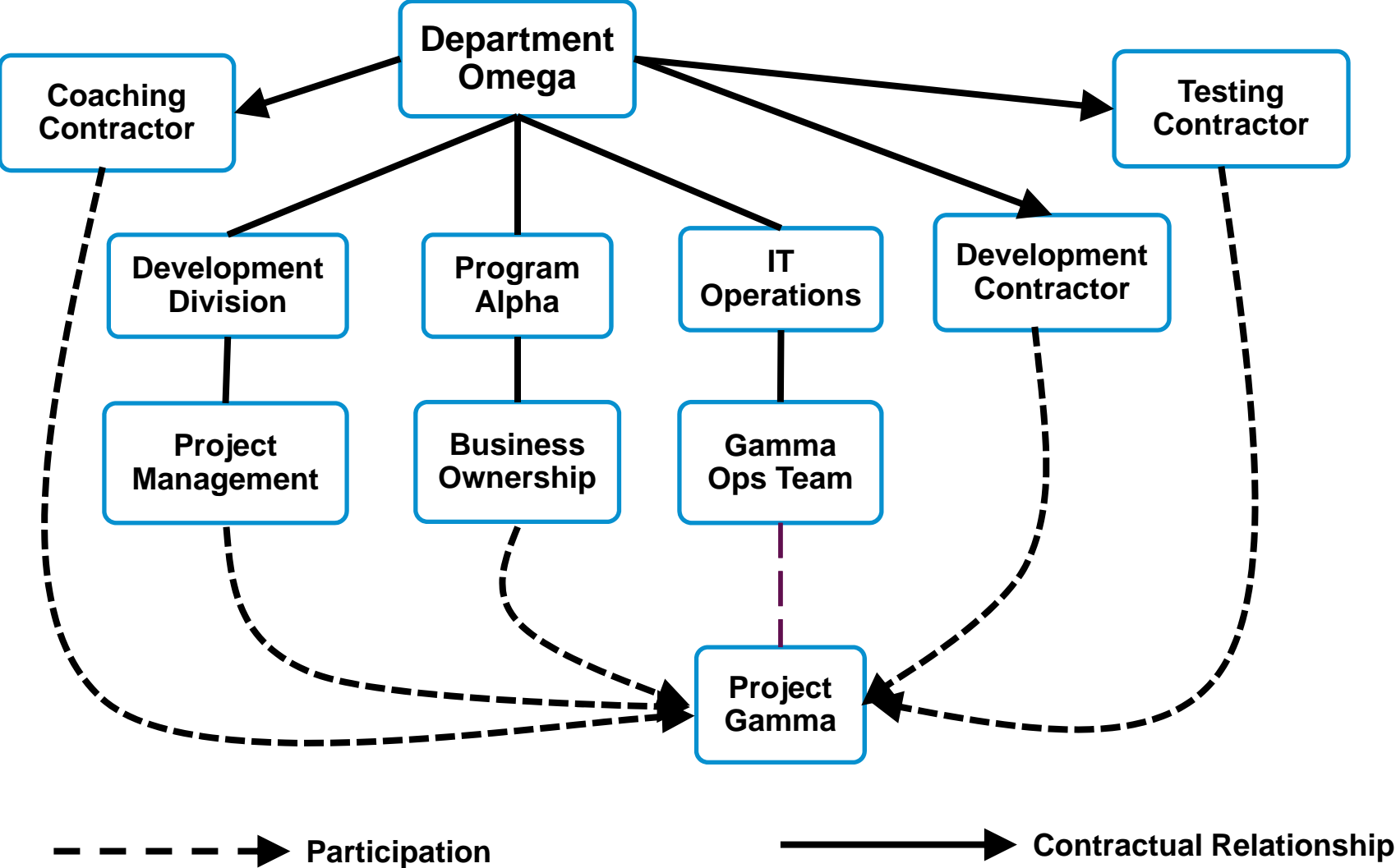
—————> Contractual Relationship

# Government as the Integrator



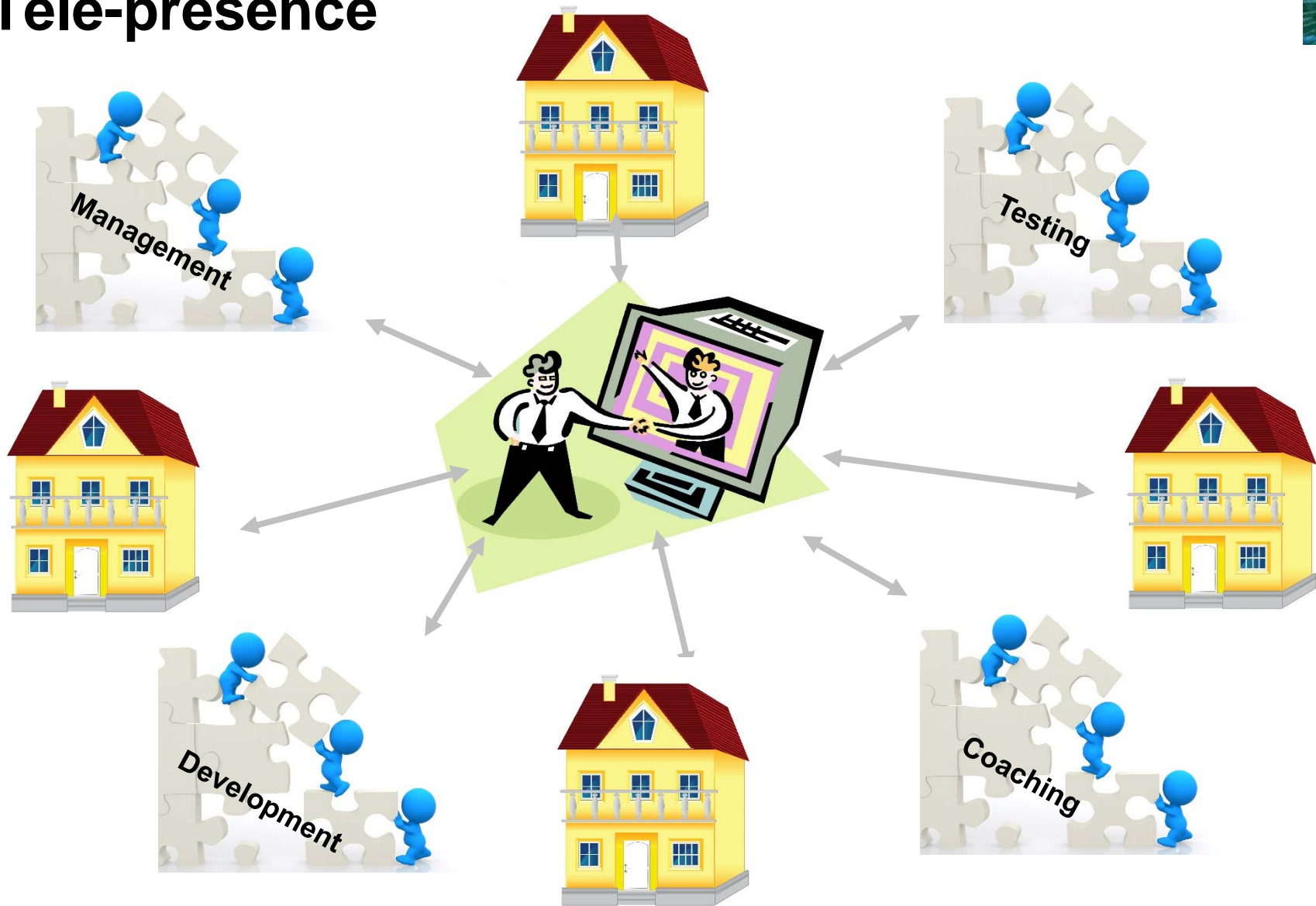


# Organizational Structure



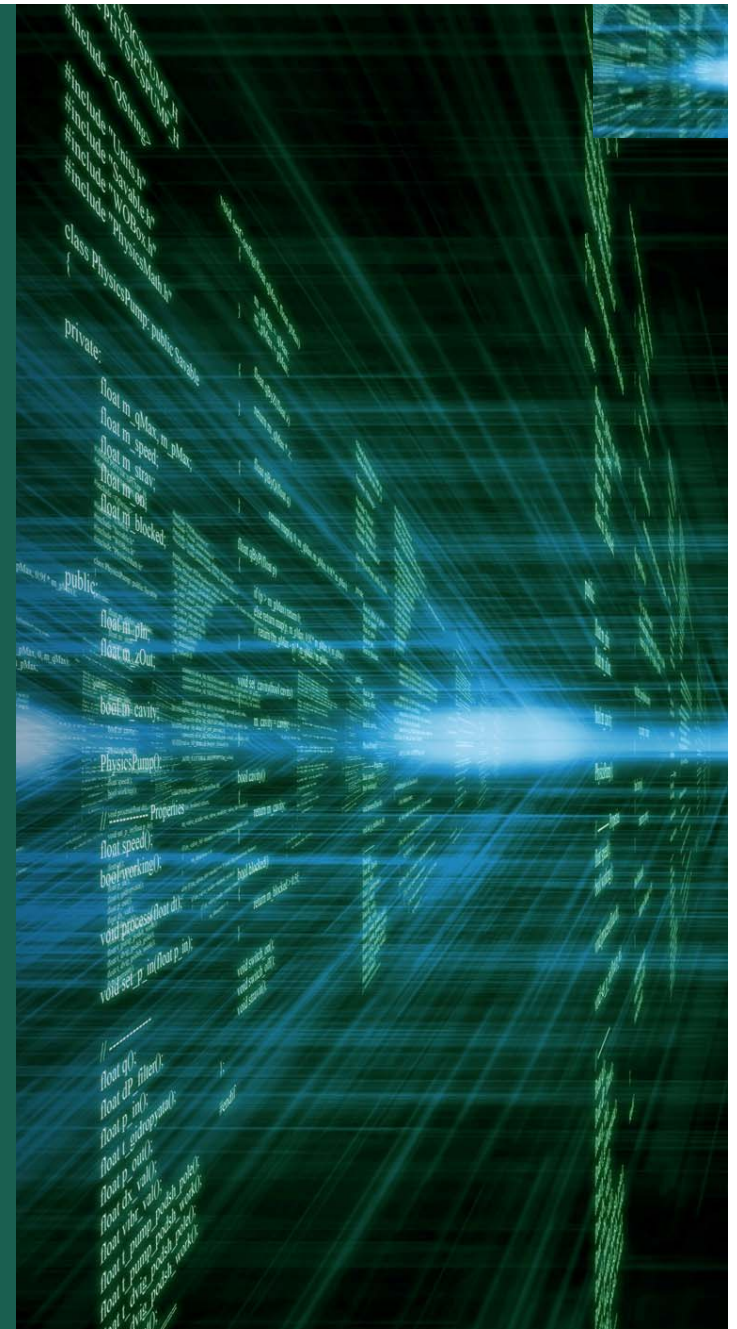


# Tele-presence

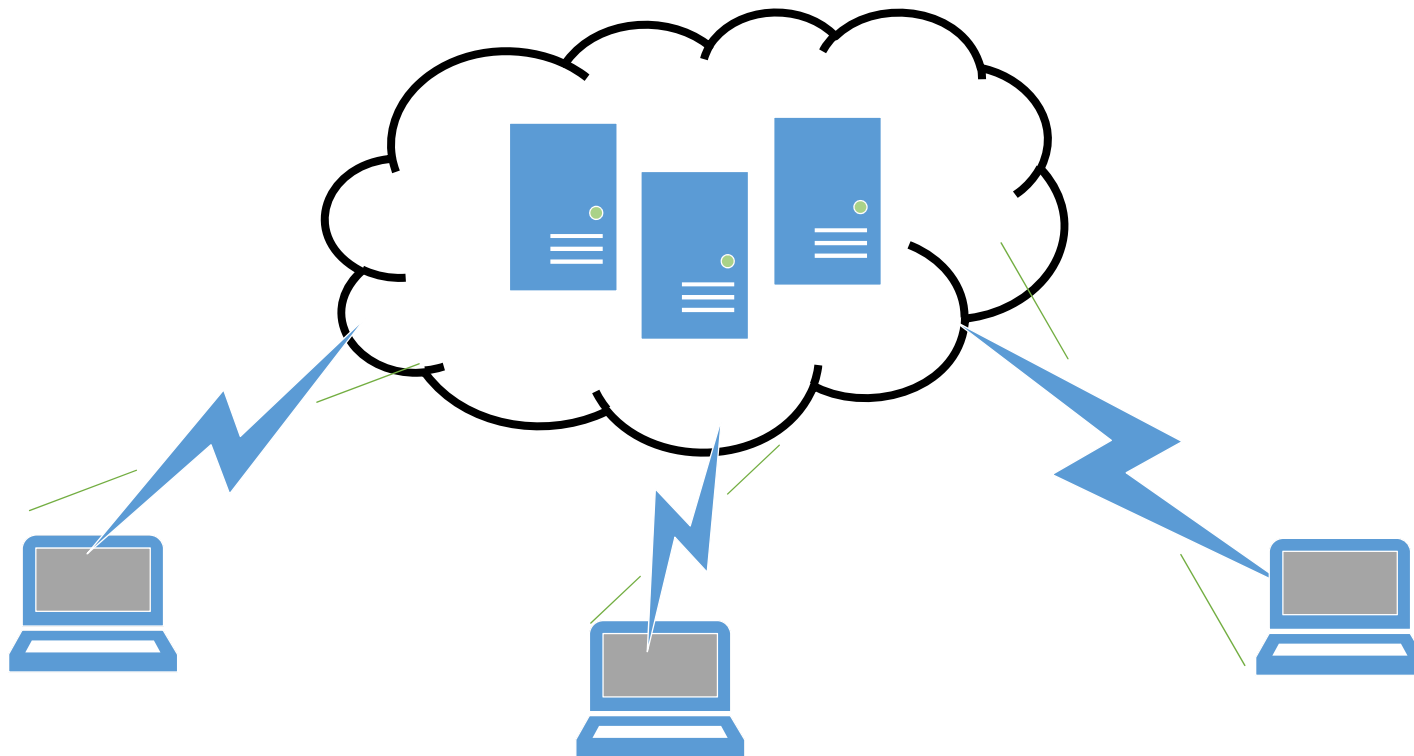


# A Case Study: Experiences with Agile and Lean Principles

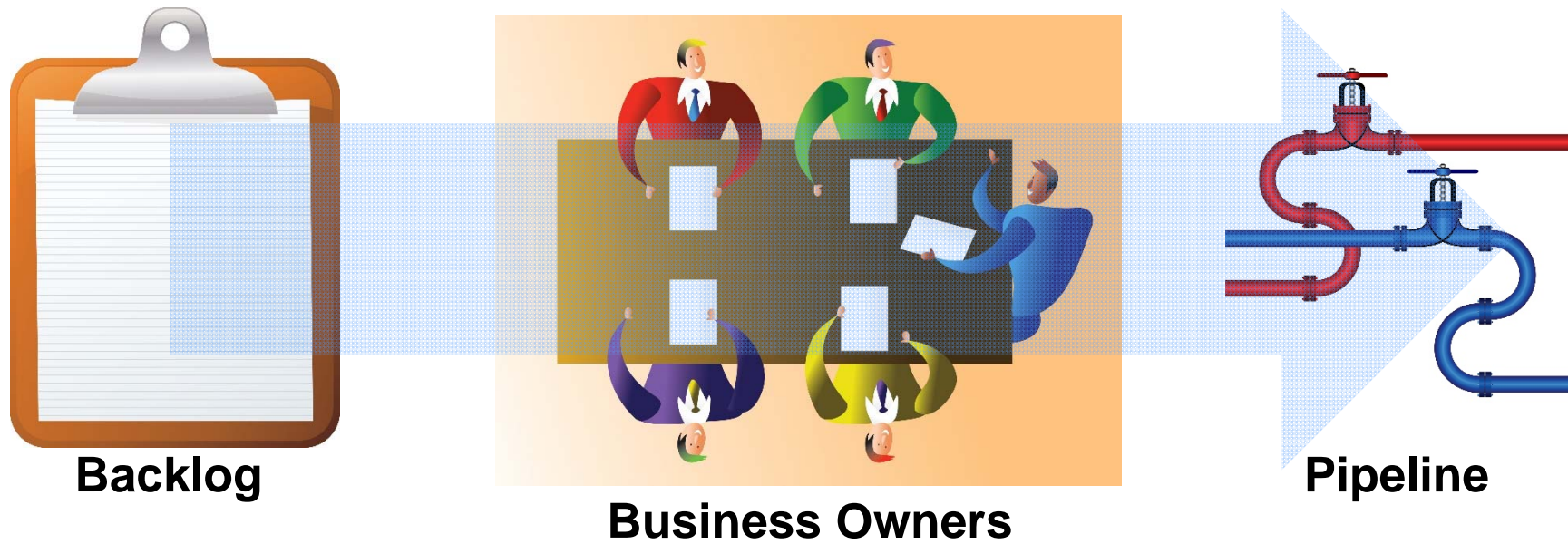
## Observations



# Cloud Development



# Requirements



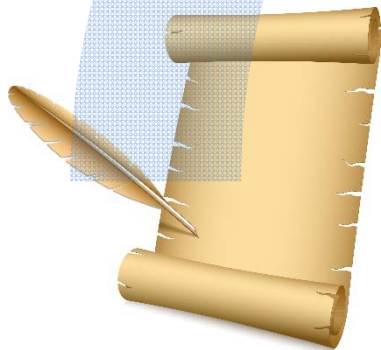




# Acceptance Testing



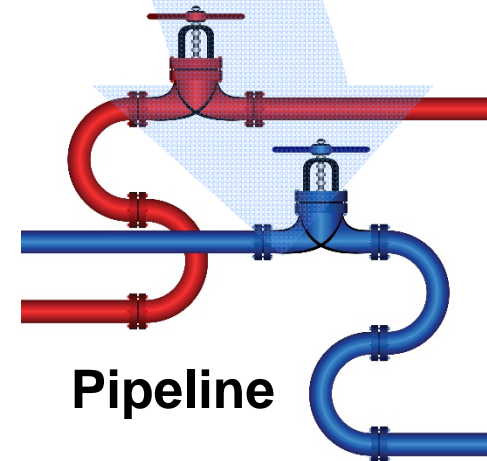
**Business Owners**



**User Stories**



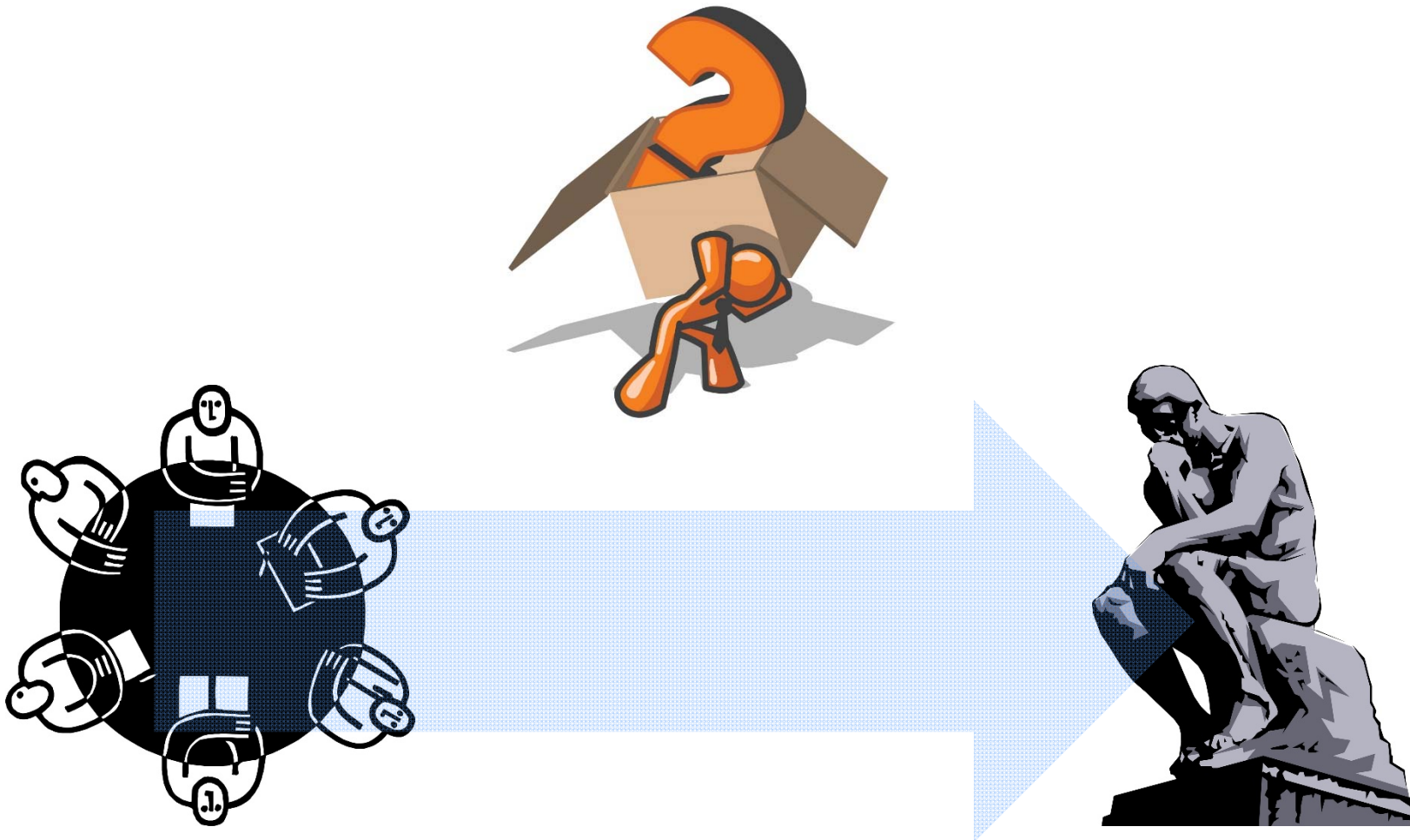
**Test Scripts**



**Pipeline**



# Estimation

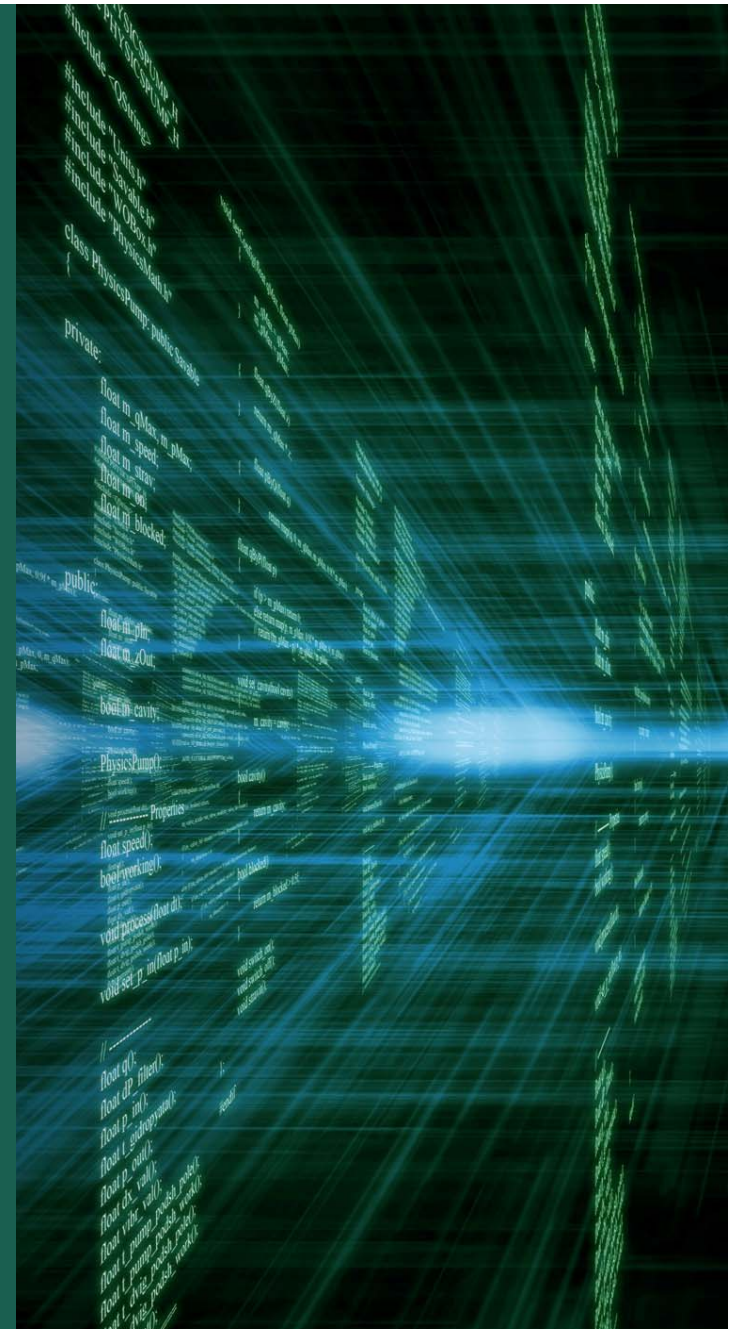


# Risk Management



# A Case Study: Experiences with Agile and Lean Principles

## Conclusion





# Summary

---

Background      Critical Federal IT System

---

Agile and Lean Methods

---

Research

---

Sharing Experiences

---

Landscape      Outsourcing

---

Government as the Integrator

---

Organizational Structure

---

Tele-presence

---

Observations    Cloud

---

Requirements

---

Acceptance Testing

---

Estimation

---

Risk Management

---

# Questions

