

Governance, Risk and Compliance in the Digital Age

Agile Governance

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Agenda

Terms and Definitions

IT Projects – Facts and Figures

Why IT Projects fail?

Agile Methods – Agile Philosophy

Agile Governance

Some details about me

- Vangelis Monochristou
- PhD in Applied Informatics (Thesis: *Agile Project Management Methods and their use in Public Sector IT Projects*), University of Macedonia, Thessaloniki, Greece, 2011
- MSc in Insurance & Risk Management, Cass Business School, London, 1998
- BSc in Applied Informatics, University of Macedonia, Thessaloniki, Greece, 1997
- > 12 years Project Management professional experience mainly in IT sector
- PMI-ACP® (July 2013) 
- PRINCE2® Practitioner (March 2012) 
- PMI® Cyprus Chapter Member 
- Head of Systems Integration Department - NetU Consultants Ltd 
- Co-Founder of Agile Cyprus (non-profit, volunteer community) 

TERMS AND DEFINITIONS

Terms and Definitions

- **Governance:**

- the action, manner or fact of governing
- the function or power of governing

- **Good Governance:**

- the process of decision making and the process by which decisions are implemented (or not implemented)

Terms and Definitions

- **Corporate governance:**
 - broadly refers to the mechanisms, relations, and processes by which a corporation is controlled and is directed; involves balancing the many interests of the stakeholders of a corporation
 - is the system by which companies are directed and controlled

Terms and Definitions

- **Project governance:**

- is a subset of corporate, focusing on the areas or corporate governance related to project activities, such as: Portfolio direction, Project sponsorship, Project and Program management efficiency, Monitoring and Reporting.

Source: Weaver, P. (2007). Effective Project Governance- Linking PMI's standard to project

Terms and Definitions



Terms and Definitions

- **Agility:**
 - the power of moving quickly and easily; nimbleness
 - the ability to think and draw conclusions quickly; intellectual acuity
- **Agile:**
 - able to move quickly and easily; nimble
 - able to think and understand quickly
 - **relating to or denoting a method of project management, used especially for software development and IT projects**

IT PROJECTS – FACTS AND FIGURES

IT Projects – Software is everywhere

Software is what lets us get cash from an ATM, make a phone call, and drive our cars

A typical smart phone contains million lines of software code

The average company spends about 4 – 6% of revenue on IT, with those that are highly IT dependent (e.g. financial and telco) spending more than 10% on it

IT is now one of the largest corporate expenses outside employee costs

IT Projects - Reality



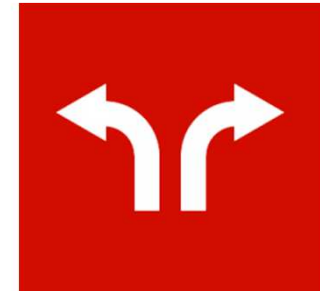
Estimate / Time
Overruns



Budget Overruns



Quality Problems



Deviations from the
real customer needs

IT Projects - Reality

Only 1/3 of the projects are completed on-time and on-budget

Most of the projects cost much more than their original estimates

For the completed projects, most of them include only part of the originally-specified features and functions

Facts and Figures: CHAOS Report

	2011	2012	2013	2014	2015
SUCCESSFUL	29%	27%	31%	28%	29%
CHALLENGED	49%	56%	50%	55%	52%
FAILED	22%	17%	19%	17%	19%

Project challenged: The project is completed and operational but over-budget, over the time estimate, and offers fewer features and functions than originally specified

Facts and Figures

According to a study of 5,400 large scale IT projects (projects with initial budgets greater than \$15M):

- **17% of large IT projects go so badly that they can threaten the very existence of the company**
- **On average, large IT projects run 45% over budget and 7% over time, while delivering 56% less value than predicted**

Source: McKinsey & Company in conjunction with the University of Oxford, 2012

Facts and Figures



Back in 2012, Gene Kim and Mike Orzen calculated the global impact of IT failure as being \$3 trillion annually

Source: <http://www.zdnet.com/article/worldwide-cost-of-it-failure-revisited-3-trillion/>

An Example: NHS National Programme for IT

Project Description

- The National Programme for IT in the NHS (NPfIT) was the largest public sector IT programme ever attempted in the UK, originally budgeted to cost approximately £6 billion over the lifetime of the major contracts
- Initially expected to “join up” NHS services through technology
- Expected duration: 3 years

Results

- Almost £15bn over budget
- The programme was dismantled by the Government in 2011, almost ten years after the official initiation of the project in 2002

WHY IT PROJECTS FAIL?

Main Causes of Failure

Scope Creep

Use of immature technology

Inaccurate estimates of required resources

Inability to handle the project's complexity

Poorly defined system requirements

Poor communication

Poor reporting of the project's status

Poor project management

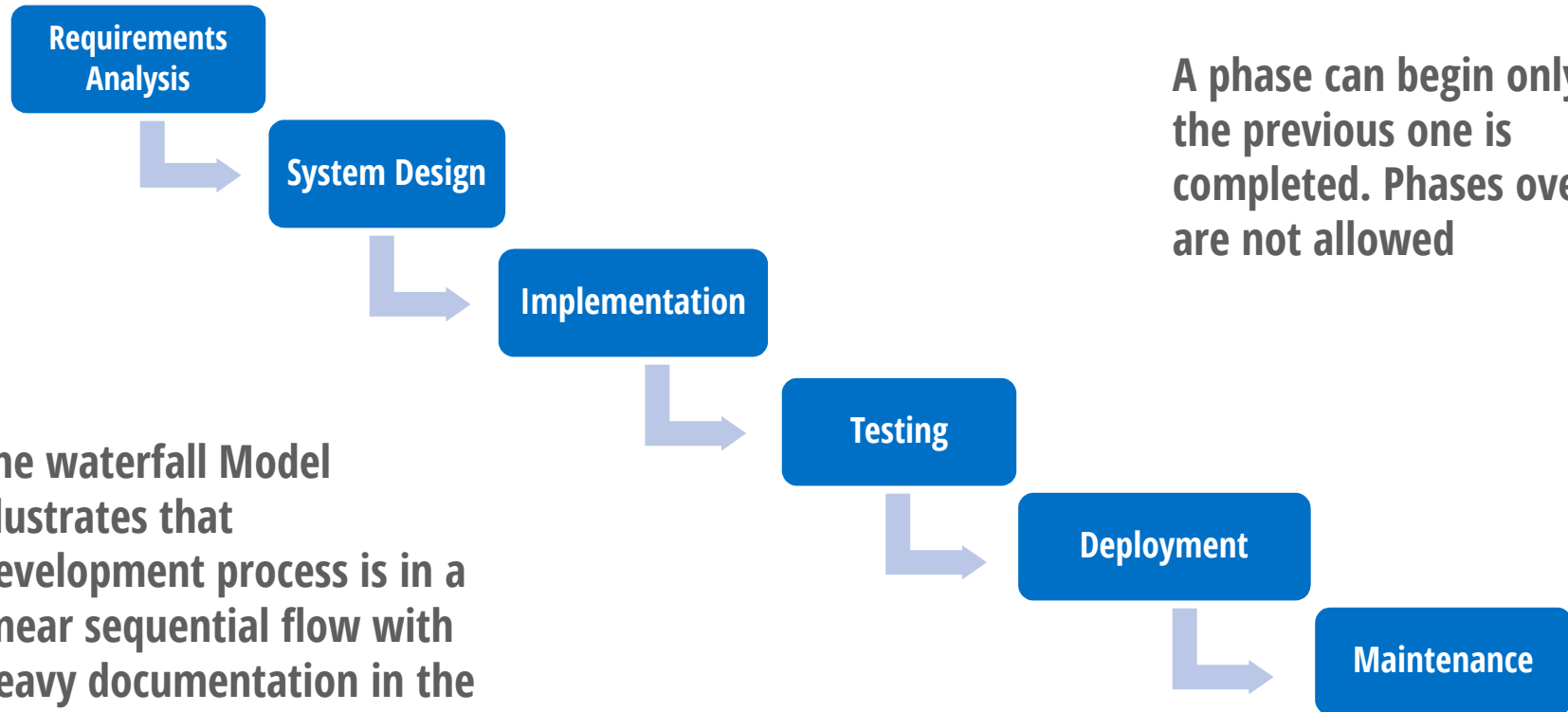
Unmanaged risks

Stakeholder politics

Unrealistic or unarticulated project goals

Commercial pressures

Waterfall (Traditional) Model



The waterfall Model illustrates that development process is in a linear sequential flow with heavy documentation in the end of each phase

A phase can begin only if the previous one is completed. Phases overlaps are not allowed

Building a bridge vs. Software development

Building a bridge	Software Development
The problem is well understood	Some problems are understood, others are not
Sound scientific principles underlie bridge design	The scientific principles underlying software construction are still being developed
The requirements for a bridge typically do not change much during building	Requirements typically change during all phases of development
There are many existing bridges	Although there are many existing applications, there are areas in which only a few applications have been written

Source: Grogono P., SOEN 341: Software Process - Lecture Notes, Department of Computer Science, Concordia University, Montreal, Quebec, Jan 2003

Building a bridge vs. Software development

Building a bridge	Software Development
There are not so many types of bridges	There are many different kinds of applications
When a bridge collapses, there is a detailed investigation and report	When a program fails, the reasons are often unavailable or even deliberately concealed
Engineers have been building bridges for thousands of years	Programmers have been writing programs for 50 years or so
Materials (wood, stone, iron, steel) and techniques change slowly	Materials (hardware) and techniques (development platforms) change rapidly

Source: Grogono P., SOEN 341:Software Process - Lecture Notes, Department of Computer Science, Concordia University, Montreal, Quebec, Jan 2003

Waterfall (Traditional) Model

Waterfall Model is more suitable when:

Requirements are very well known, clear and fixed

Product definition is stable

Technology used is well understood

There are no ambiguous requirements

Waterfall (Traditional) Model – A poor model?

However this is not the case in today's
Software Development / IT Projects

Requirements are
very well known,
clear and fixed

Product definition is
stable

Technology used is
well understood

There are no
ambiguous
requirements

AGILE METHODS – AGILE PHILOSOPHY

The Agile Approach

Based on a quite different approach that emphasizes:

Iterative Development

(small versions of working software / frequent delivery of business value)

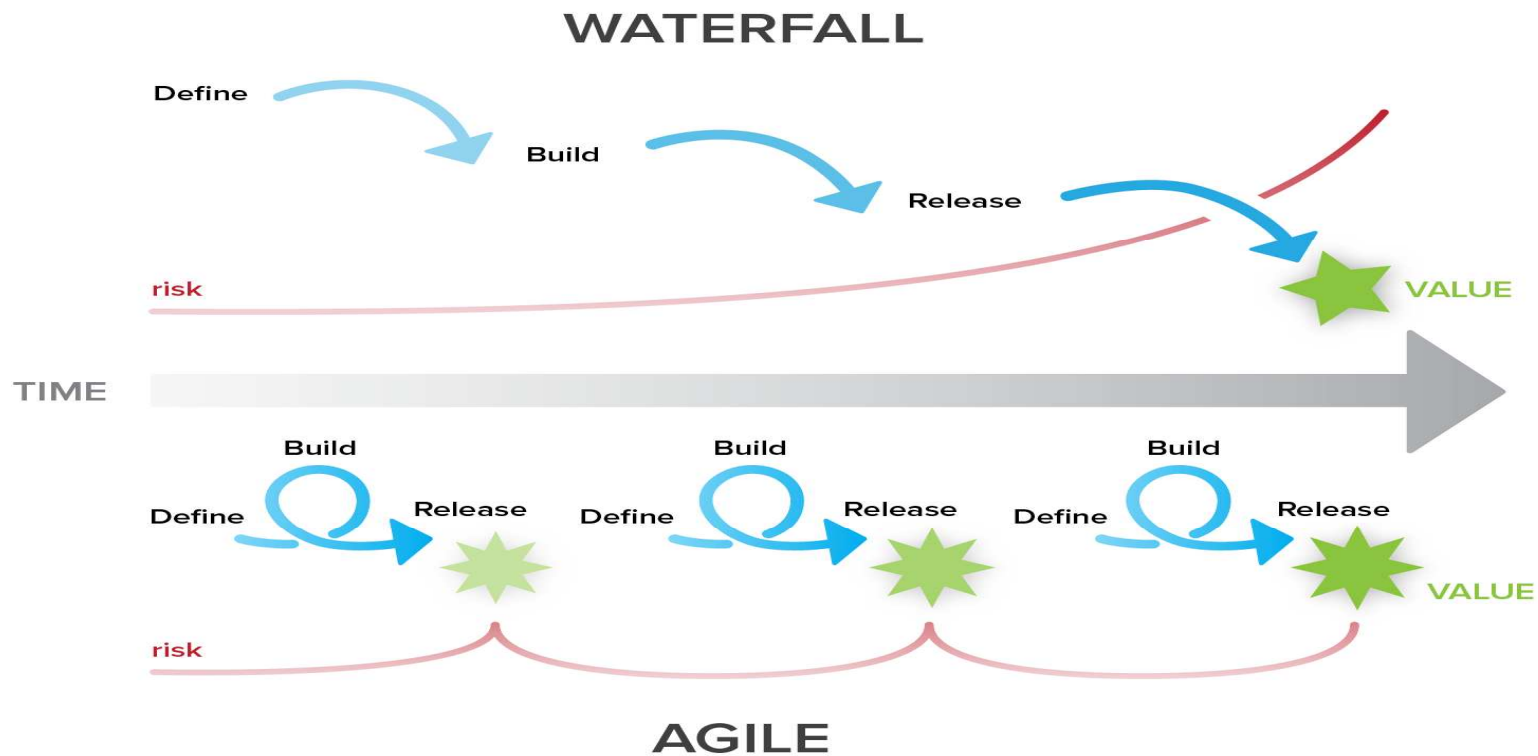
Close and continuous collaboration with the customer

(Customer is in fact part of the development team)

Adaptability

(Welcome changes even late in development)

Agile Methods – Delivery of Value



Source: <https://www.axian.com/2015/05/18/is-your-product-providing-timely-value-to-your-customer/>

Agile Methods – A collection of Methodologies

Extreme Programming (XP)

SCRUM

Crystal Family

Feature Driven Development

Dynamic Systems Development Method

Lean Development

Kanban

Agile Methods - Fundamental Values

The Agile Manifesto was written in February of 2001 by seventeen independent-minded software practitioners (www.agilemanifesto.org):

Individuals and interactions *over* processes and tools

Working Software *over* comprehensive documentation

Customer Collaboration *over* contract negotiation

Responding to change *over* following a plan

Agile Methods - Fundamental Values

Agilists are not saying that Processes, Tools, Documentation and Contracts are useless or unimportant

They just claim that *"while there is value in the items on the right, we value the items on the left more"*

Agile Methods - Basic Principles (1/2)

Our 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 software 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

Agile Methods - Basic Principles (2/2)

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 behaviour accordingly

Agile Methods – Main Aspects

Software is developed iteratively and incrementally

It is acceptable by all the stakeholders that some of the requirements will emerge during the implementation phase

Customer should be located in proximity to the development team, always available when needed

Members of the development team have constant and uninterrupted communication with each other

Documentation is not a primary process. The goal is to deliver valuable but not unnecessary documentation

Development team has the necessary expertise to manage and handle effectively all the changes which will arise

Reusability of software is not the primary goal

Cost of changes is not dramatically increased over time

Agile Philosophy

Today's IT Projects are extremely complex, complicated, integrating new technologies and tools and with customers / users that become more and more demanding

It is widely accepted that changes during the life-cycle of an IT Project are inevitable

Instead of trying to avoid the change, it is better to be well prepared to manage the change efficiently, without compromising the project's success

Agile Methods – Benefits of Adopting

Ability to Manage Changing Requirements / Priorities

Increased Team Productivity

Improved Project Visibility

Increased Team Morale / Motivation

Enhanced Software Quality

Faster Time to Market

Reduced Project Risk

Improved Business / IT Alignment

Agile Methods – Facts

HP online survey of 601 development and IT professionals (2015):

- Agile is the new normal
- Two-thirds described their company as either "pure agile" or "leaning towards agile, regarding the primary development method used in their organization across projects
- Only nine percent describe themselves as using "pure waterfall" or "leaning towards waterfall"
- Driven by the young, but felt by all



Agile Methods – Facts

Project Management Institute - Pulse of the Profession 2015:

- 38% of organizations report using agile frequently
- 75% of highly agile organizations met their goals, 65% finished on time, and 67% finished within budget. Compared to organizations with low agility, where only 56% met their business goals, 40% finished on time, and 45% finished within budget
- Agile organizations grow revenue 37% faster and generate 30% higher profits than non-agile companies



Agile Methods – Facts

Project Management Institute - Pulse of the Profession 2016:

- 9% of organizations report using agile always
- 28% of organizations report using agile often
- 31% of organizations report using agile sometimes

Agile is not a silver bullet

Agile is not the answer to all IT problems

There's nothing inherently magical about Agile. You can fail just as spectacularly on an Agile project as you can do using any other traditional method

Agile demands a change in the organizational culture and this is not an easy task

Is agile an option?

Back in 2011, both the United States Government Accountability Office and the United Kingdom National Audit Office recommend the use of Agile as being the best way for building software products in government departments, and they *“provide guidance for agile adoption and governance”*

AGILE GOVERNANCE

Agile vs. Project Governance

- **Agile governance is the application of Agile values, principles and practices to the task of governance**
- **Typical IT Project Governance:**
 - Assumes traditional project management / delivery
 - Includes big up-front analysis
 - Progress & Compliance 'demonstrated' through heavy documentation

Agile Governance

A “Governance Authority” needs to ensure that:

- Portfolio priorities are aligned with Business Strategy
- Projects initiated are aligned with these priorities
- The right stakeholders are engaged with each project
- Projects are properly resourced & planned
- Project priorities and progress are always visible
- Transition to production is properly controlled
- Project performance is measured and continuous improvement is encouraged

Couldn't this also be achieved following the agile approach??

Based on: Craddock, C. Davies, Agile Governance - Appropriate oversight for the Agile organisation

Agile Governance

Organisations can decide for themselves how they demonstrate compliance. This requires:

- **Analysis of the business and / or legislative imperatives**
- **Understanding of the underlying delivery philosophy**
- **Aligning governance with that philosophy**

In an Agile context this will probably requires:

- **The creation of an alternative governance approach**
- **A complete change of mindset from the traditional**
- **A focus on artefacts delivered that are essential to the delivery process**

Source: A. Craddock, C. Davies, Agile Governance - Appropriate oversight for the Agile organisation

Agile vs. Project Governance

- **The concepts of agility and project governance are not fundamentally opposed. Each is an attempt to improve the finished product:**
 - **Scrum (Agile) strives to do this through close collaboration and the short inspect-and-adapt cycles of the timeboxed sprints (development iterations)**
 - **Project governance strives to do it by what we might call inspect-and-approve (or reject) checkpoints in which the product or project is compared to a set of desirable attributes**

Source: Mike Cohn, The Art of Compromise - Scrum and Project Governance
<https://www.mountangoatsoftware.com/articles/the-art-of-compromise>

Agile Governance - Declaration of Interdependence

Published in 2005 as a set of six management principles intended for agile project managers:

We increase return on investment by making continuous flow of value our focus

We deliver reliable results by engaging customers in frequent interactions and shared ownership

We expect uncertainty and manage for it through iterations, anticipation, and adaptation

Source: <http://pmdoi.org>

Agile Governance - Declaration of Interdependence

Published in 2005 as a set of six management principles intended for agile project managers:

We unleash creativity and innovation by recognizing that individuals are the ultimate source of value, and creating an environment where they can make a difference

We boost performance through group accountability for results and shared responsibility for team effectiveness

We improve effectiveness and reliability through situationally specific strategies, processes and practices

Source: <http://pmdoi.org>

Agile Governance - Principles

Focus on Value

Engage Customers

Expect Uncertainty

Unleash Creativity

**Establish Group
Accountability**

**Improve
Effectiveness**

Agile Governance - Focus

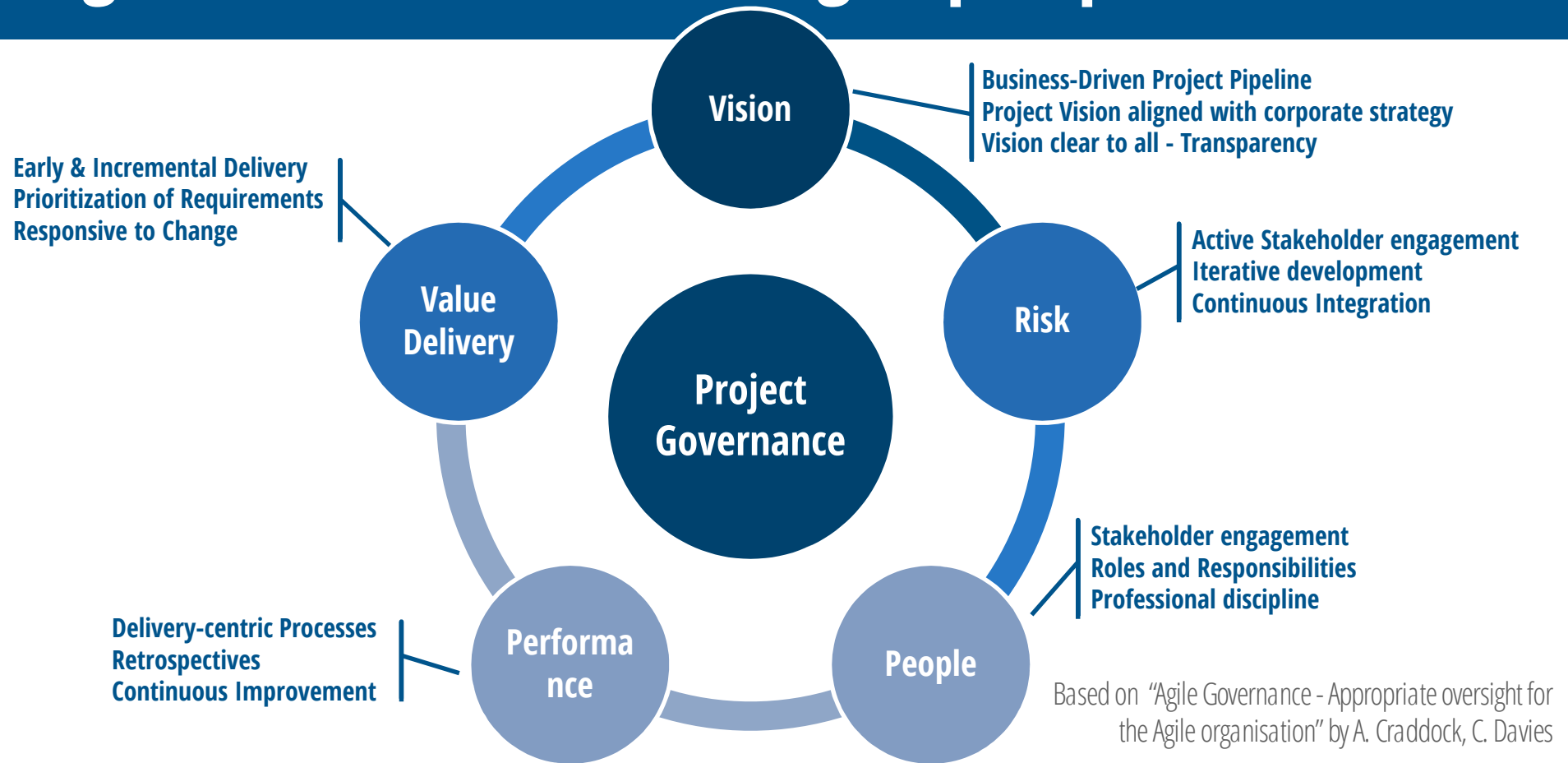
**Understanding
vs.
Documentation**

**Discipline vs.
Formality**

**Quality vs.
Bureaucracy**

**Transparency vs.
Reporting**

Agile Governance – The agile perspective



Agile Governance – The agile perspective

Applied at all levels

Enterprise

Portfolio

Programme

Project

Agile Governance - Considerations

Needs to be
“sponsored”
from the top

Means
“empowerment”

Needs some
“traditional”
controls

Thank you for your attention!

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