Complexity and project risk management

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Does complexity affect you?

Do you know

• How to recognise it?
• What to do about it?
Complexity creates risk!

Does it?

Systems science
Modelling
Forecasting
Detailed planning
Tight change control
Objective control

Complexity science
Sensing
Continuous readjustment
Setting the envelope
Co-evolution
Complexity

How to recognise it

Why it matters

What to do about it

Relationship to risk
Recognising complexity
One view of complexity is seen in the way purpose and patterns can be discerned in the mass behaviour of a large number of simple separate components of a system: flocks of birds, traffic flows, schools of fish.
Broadleaf
Broadleaf
The behaviour of flocks of birds shows us that mass behaviour can emerge from a large number of individuals interacting but it does not help a lot with understanding projects.

Another approach is to look at the number of components in a system and how they are connected to one another – structural complexity.
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There might be some applications for structural complexity but it is a complicated form of analysis and again not especially useful for human systems.

The most useful approach comes from looking at the people in a system and how they interact with their context.
Alice’s project

Executive

Intentions & aspirations

Complexity

Context

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If it wasn’t for the people involved …

Partially aligned intentions and aspirations
Alignment, diversity, fluidity

People can change the context
Stakeholders exercise influence

The context changes their intentions
As they see what is going on and what is possible, they change what they want
Why it matters
Nothing new, I know how to fix that ...

- Stakeholder consultation
- Scope definition
- Change control

...

What made sense a month ago might not now

What makes sense now might not next month

Linear thinking can’t keep up
Patterns and habits
Balance

Get the job done!

Stay in touch and spot early signs of disturbance.
Major disturbance to your work
If it looked like it might happen again

Feel our way and keep options open

Get some experts to look at it

If it looked like it might happen again

Be ready to respond

It will be obvious what to do
Broadleaf
Feel our way and keep options open
Learning curve extended
Regulatory change
Consultation triggered 12mth extension
Be ready to respond

Delivery team modify scope
Productivity less than assumed

Get some experts to look at it
Forex variation causes material cost growth

Poor legal advice, scope growth in legal services
It will be obvious what to do
Get some experts to look at it. It will be obvious what to do.

Feel our way and keep options open.

Be ready to respond.

Obvious

Procedure

Complicated

Analysis

Complex

Chaos

Clamp down

Interactive

Cynefin
For more on the Cynefin framework and the large body of work that flows from it, see the Cognitive Edge website, search for Cynefin on YouTube or ask me for references that I can email to you.
What to do about it
Principles

Keep options open

Exploit stakeholders
- Distributed input
- Granular insight

Disintermediation
- Link insights directly to decision makers
- Avoid expert analytical filtering

Anticipatory awareness
- Spot weak signals

Narrative capture
- Workshops
- Web enabled
SenseMaker™ is a product of Cognitive Edge that allows narrative capture to be used to gather insights from large numbers of people, over time if appropriate, and for patterns in the responses to be identified that assist in making sense of a system as it is now and is likely to develop.
Two simple ideas

Work out which domain you are about to enter before starting

- Whole project
- Important parts

Where it is Complex, treat everything you do as much as a context update as it is a task completion
Risk and complexity
Complexity causes risk?

Only if you let it

• Rigid structures
• Close off options early
• Trying to impose an outcome that might not fit

An approach designed for ordered behaviour will be swamped by a complex system

What approach will suit your project?
Think about it!

Can an orderly approach be successful?
- Stakeholders exercising influence
- Stakeholders shifting position
- Learning as we go

Is your project being disturbed by its environment or is it trying to impose itself on and environment that has its own ideas?
- Disturbance demands adaptability
- Imposition generates push back

Can you work with your environment?
Complexity is challenging

It doesn’t cause risk

The way we respond to it causes risk!
The closing cartoon is copyright, see


for the original
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If you would like further information about this topic, please contact us.

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