Systems thinking - an outline

Purpose

To help me recognise the multiple influences at play in a situation and there are a wide range of consequences from my work or decisions.

Opportunities for use

The whole time – particularly when there is a risk of being too close to the situation – or too focussed on the result.

Benefits

- ✓ Decisions are more likely to take account of all stakeholders.
- ✓ Less risk of surprise!
- ✓ Outcomes will be reviewed from a broad view of the world, rather than from a narrow focus.
- ✓ People begin to recognise the relationships between cause and effect – and the importance of time-lags in the system.

Outline of this tool

Systems thinking is looking at a situation of interest as a whole, including the interactions - recognising the whole and the detail.

Systems thinking began in the world of large engineering projects as a problem solving tool. (see e.g. Systems Dynamics – Forrester – in Senge P et al below)

As society has become increasingly connected and the interactions between peoples have increased, traditional ways of thinking about operations have no longer sufficed. Systems Thinking is now applied throughout all aspects of organisations – even to the way people react to each other (see e.g. Soft Systems – Checkland – below)

How to use this tool

As you reflect on plans and issues, help people to recognise the importance of understanding the connectedness of forces that impact on situations. Also that most people want a working environment where they are not continually 'fighting the system' and where various parts of the organisation are working together, not against each other.

Using diagrams and simple feedback models, recognise the impact of the passage of time on data and reactions to events – some may help (positive feedback) and some may reduce impact (negative feedback).

Learn to recognise the language of Systems thinking – often referred to as 'Archetypes' – Reinforcing loops, when small changes become big changes – Balancing loops, where the systems reaches stability and meets resistance or limits – Fixes that backfire, when reactions take place at a different time – Limits to growth – when some external factor cuts off growth – Shifting the Burden – when reliance on the short term fix grows stronger, while efforts to correct the real problem grow weaker – Tragedy of the Commons – when total activity grows, but the gains from individual activities are declining – Accidental Adversaries – each side's performance either declines or stays level and low, while enmity or competitiveness increases over time.

The literature and searches will provide suggestions for tackling these and other Archetypes – the challenge is to engage in conversations where they are recognised as such, so that solutions can be devised. Build awareness that the most favourable circumstances (for everyone) can only be created and sustained by understanding interactions between all parts of 'the system'.

References

Checkland, P, & Scholes J. (1999). *Soft systems methodology.* John Wiley.

Hoverstadt, P. (2008). *The Fractal Organisation.* John Wiley.

Senge, P. et al. (1994). *The Fifth Discipline Fieldbook. p 87-190* Nicholas Brealey.

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