



# Alignment in Product Development

## How different disciplines successfully interact within an organizational environment

**Alignment** is a system measure of the **compatibility of interactions** towards a **common goal**.

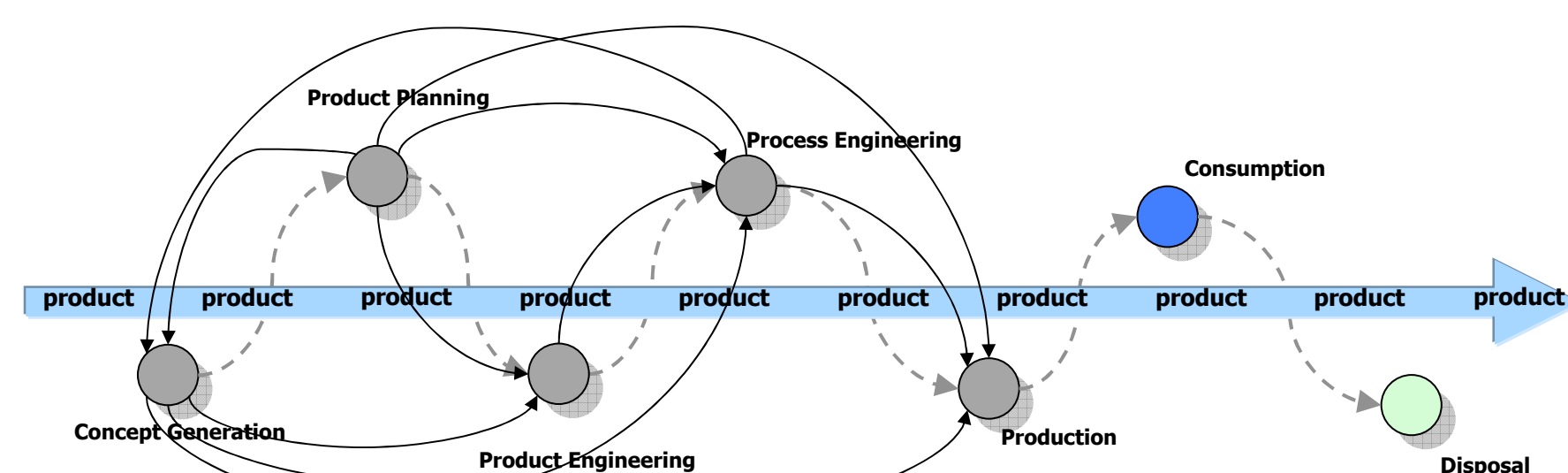
- It can be observed at the level of the **individual ties** and taken as an aggregate composite of those individual ties.
- The health of a tie is determined by the extent to which alignment is **required**, **implementable** and **executed correctly**.

### The Problem

Members of an enterprise cooperate by distributing tasks to pursue a common goal better than they could do individually, if at all.

This raises the fundamental question of coordination or alignment.

Harmonization between each element in the enterprise requires interactions among them, usually established through communication, to ensure that outputs of one stage are consistent with the expected inputs of the next stage



### Research Questions

- How does **size** of organization affect the alignment state?
- How much do **methods used** affect the alignment state?
- Is alignment **transitive**? How far?
- Does weak **awareness signal mis-alignment**?
- Is the alignment state **stable/sustainable**?
- What specialties are **more susceptible to alignment**?

"The primary task of management is to get people to **work together in a systematic way**"

Christensen et al, (2006), *The Tools of Cooperation and Change*. Harvard Business Review

"In a turbulent, competitive environment in which customers are demanding and speed is essential, **the underlying source of superior performance is integration**. (...) [which means] linking problem-solving cycles, bringing functional groups into close working relationships, and achieving **a meeting of the minds in concept, strategy, and execution**."

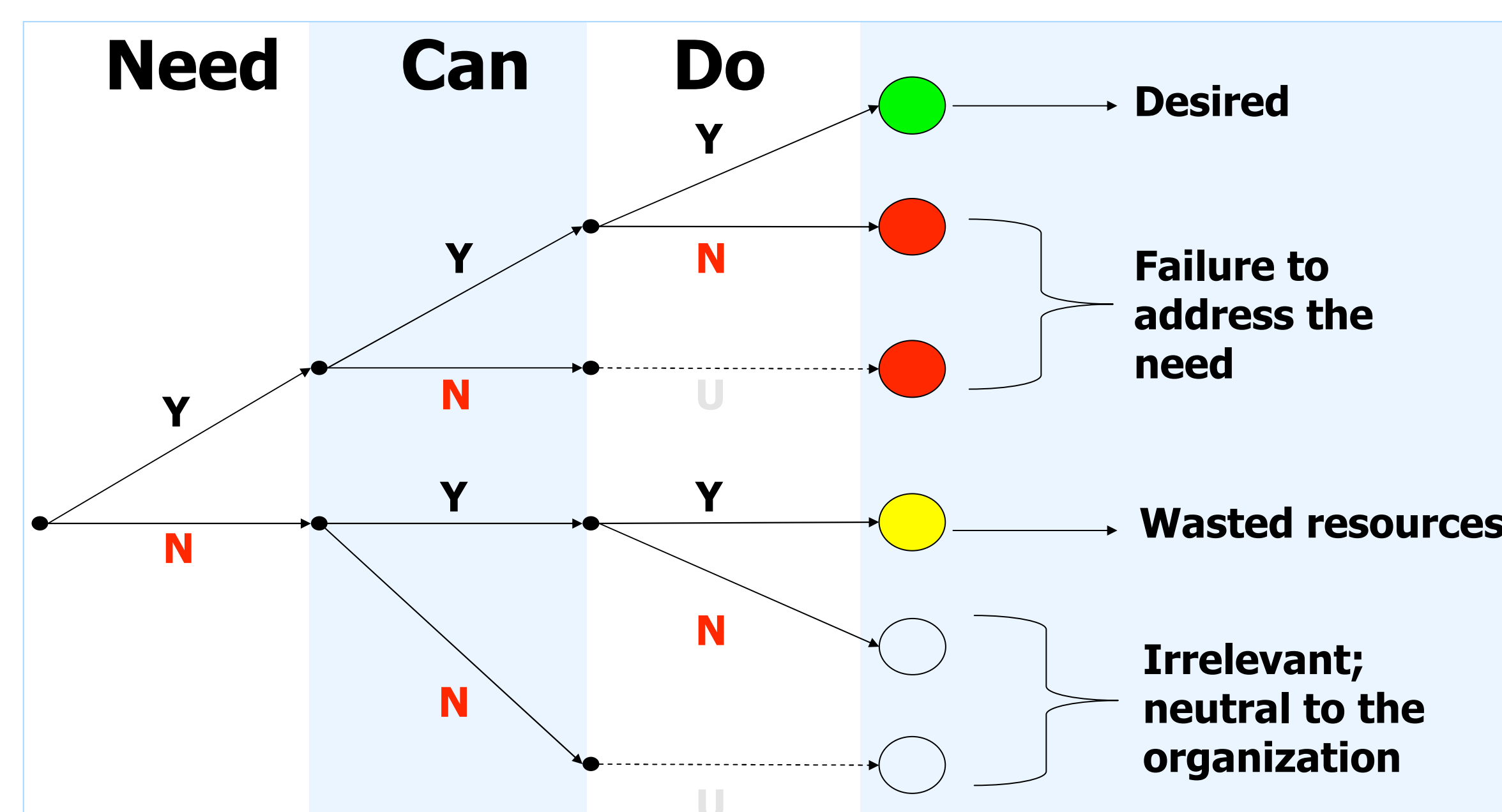
Clark and Fujimoto (1991) *Product Development Performance*, Harvard Business School Press

### Research Approach

Decomposing the relationships within the organization in to three fundamental components, all observable using different research methods.

- NEED** Is there a requirement that actors be aligned?
- CAN** Is there capability for actors to align?
- DO** Do the actors exercise the possibility to align?

Integrating the three components in a logic tree reveals the contributing state of a relationship to the system alignment



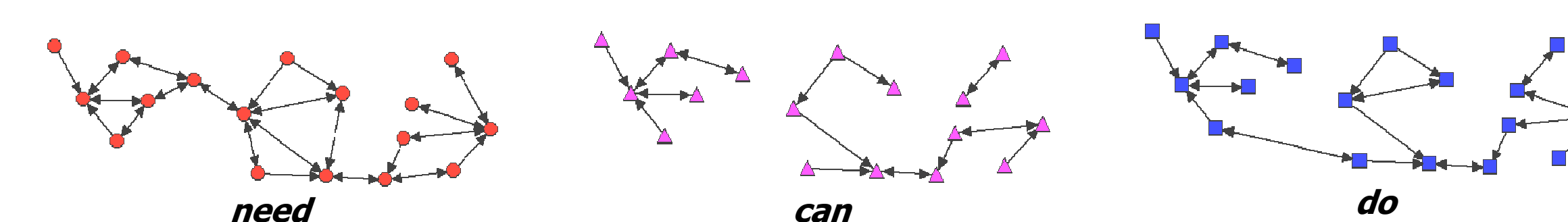
### Data Collection

Targets for data collection are **product development focused** organizations with a complexity dimension. Complexity can be at the size and **number of people** to coordinate (>100), the **product complexity** (airplane), **product portfolio** (>5 distinct, non-platform products) or **systems strategy** (intermodal transportation modes).

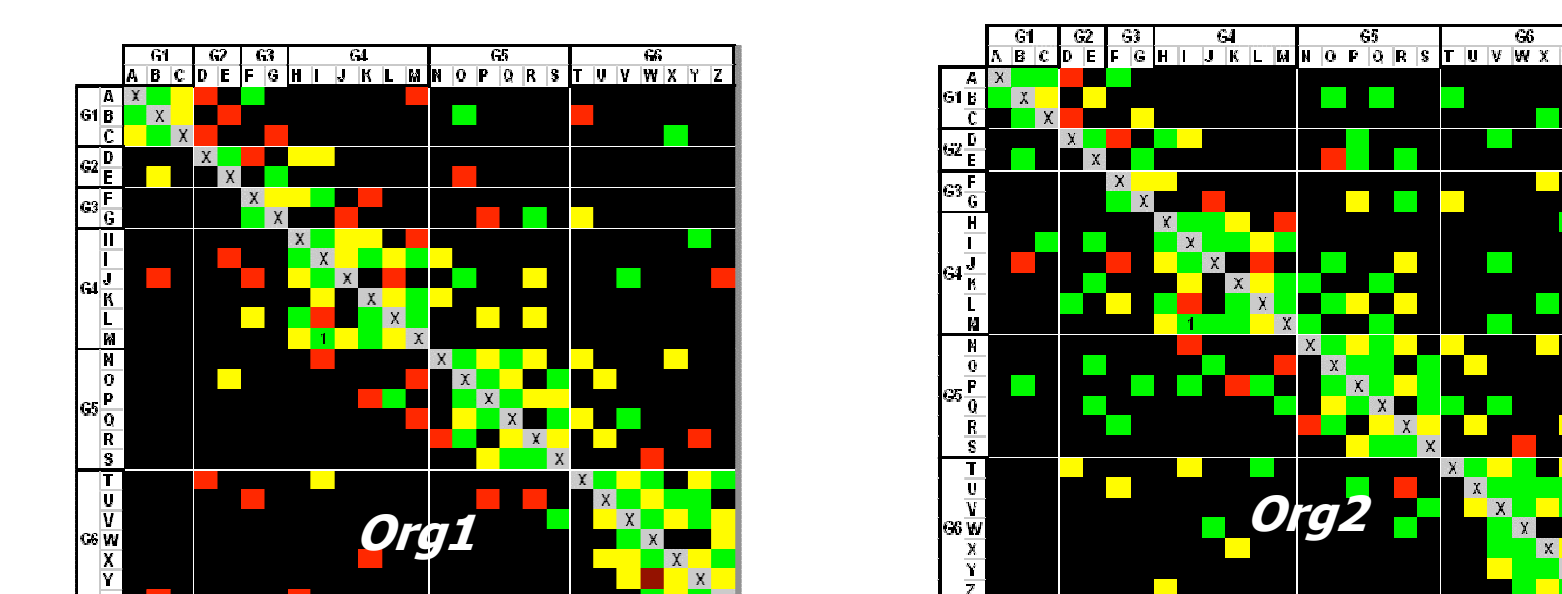
Currently looking for more sources!

### Data Analysis

**Independent structure analysis** of each component



**Preliminary integration** of *need*, *can*, *do* in system representation



**Detailed integration** of *need* (criticality), *can* (breadth), *do* (frequency) (not shown)

### Expected Contributions

#### Academic:

Decompose and represent multi-actor interaction in a complex system

Create an alignment assessment tool

Starting point for study of several other "alignment" questions

#### Industrial:

Management tools to assess and act on alignment (Information Dashboard)

Understand implications and usefulness of different methods at the system level

Share the holistic view with specialists

Improve efficiency and throughput of Product Development process