HELMSMAN

Helmsman Guide to Complexity

Guide to Complexity

Helmsman created the complexity analysis used to evaluate the Project from work across multiple sectors. This work has produced a "Helmsman Complexity Scale" measure that is underpinned by scientific and analytical rigour.

This scale ranges from 1 to 10, and is designed to mimic the Richter Earthquake scale in terms of significance.

Helmsman Scale	Organisational Level	Difficulty Level	Project Characteristics	Examples
< 4	SME	Minor/ large	Projects that can be done by smaller organisations	Build new custom home
4 - 5	Large	Small	Projects normally performed in the business units of large organisations.	Product maintenance and competitive enhancements to ongoing business operations
5 - 6		Core	Standard core projects in the top 50-100 organisations. Normally has executive attention.	Regulatory, environmental, business upgrades. GST, Y2K, Clean fuels
6 - 7		Large	Largest projects commonly undertaken across the top 50-100 organisations. Normally have board attention.	Merger integration, core system replacement. A380 introduction
7 - 8	National National	Large National	Largest projects commonly undertaken in the Nation. Creates a noticable impact on the economy.	BHP Olympic dam, Broadband Rollout Some defence projects
8 - 9		Nationally significant	Rare and highly complex projects, seldom undertaken in the country. Creates significant impact on national economy.	Snowy river scheme, Olympics, Collins
9 - 10	International	International	Significant multi-national project	Hadron Collider, Apollo, Joint Strike Fighter, BASEL II
10.0 +	International	Global	No truly global project has yet been executed	Joint Global Warming project

Table 1: The Helmsman Complexity Scale

The scale is derived from underlying complexity data which is normalized through forced ranking to ensure that all industries can be properly compared. The model is part of the over arching Helmsman Project Success Framework. This Framework looks at the three critical disciplines that need to be in alignment in an organisation for projects to

Background

The Helmsman Complexity Scale is a comparative measure of complexity between projects in all domains. It is intended to allow management to judge the potential difficulty of a project from conception through to delivery. That means it is intended to be predictive of the complexity of a project.

The Helmsman Scale was created to serve the needs of executives who need to make decisions about proceeding and supporting projects. The Helmsman Scale arouse from the Helmsman groups work with large organisations that where having difficulty in delivering projects successfully. After research into project management competencies with the Australian Institute for Project Managers, and associated Industry reference groups, it became clear that project managers could be successful at one level of complex projects, but may fail at another. Helmsman also identified that project managers could fail on the same project at a different organisation.

This lead Helmsman to identify that three key ingredients are necessary at an organisational level for the ongoing successful delivery of projects. This framework, the Helmsman Success Triangle captures the three key areas that require understanding and management:

1) Understanding of the complexity of projects undertaken by the organisation
2) Management of the competency of the project delivery team and functions
3) Establishment of the correct Management Systems to lead and support the delivery team

These elements are demonstrated in below in Exhibit 1 below.

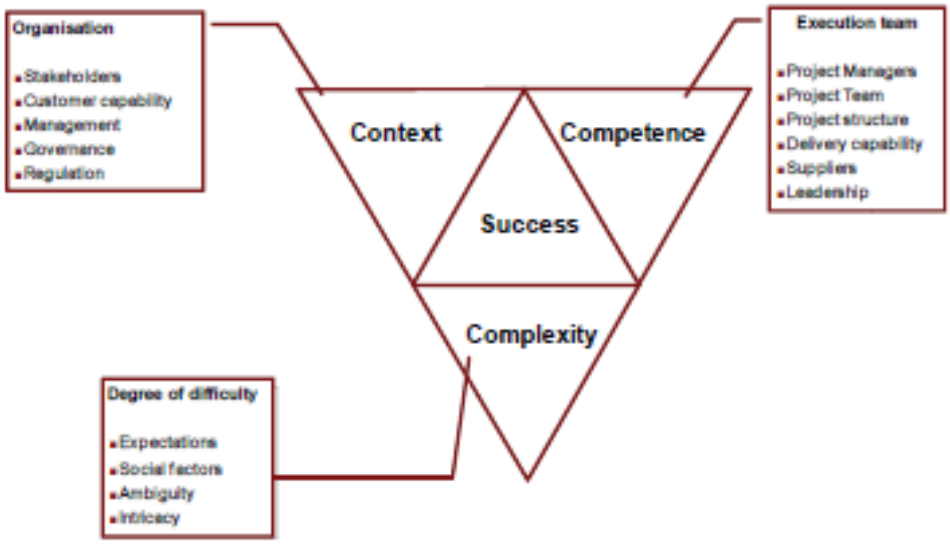

Exhibit 1. The Helmsman Success Triangle

In the Helmsman Success Triangle, to successfully deliver projects the complexity of a project must be supported by a blend of project delivery competency (technical, commercial and project management) and correct management systems (reporting, oversight, executive leadership, culture and process). It is not sufficient to improve project delivery capability if the owners and leaders do not support the project teams with good decision making, direction setting, prioritisation and leadership.

The focus of this report is on one element of the triangle, establishing project complexity. The Helmsman Complexity Scale was developed to create a standard, repeatable, objective and reliable Scale for relative Complexity.

The underlying approach.

The Scale was developed through ten years of research into factors that create complexity for project managers. To ensure integrity, Helmsman has built up a substantial database of several hundred projects (most of which have at least General Management or Senior management visibility). Within this database, Helmsman has established "marker" projects that are common across organisations, and have well understood complexity. Examples of such projects were GST implementations, Y2K work, merger integration and core system replacements

As initial factors were developed, the projects were compared against these "marker" projects and a consensus about whether the project was more or less complex then the "marker" projects were created. This allowed us to evaluate if the factor was critical and how best to measure the factor. Factors are not weighted at this stage of the model, but each factor is measured in such a way as to ensure the impact on the overall score is correct.

The measurements underlying the scale is thus continuously being refined as projects that have some variation in detail is encountered that does not easily fit the current measurement system. However, due to the number of projects in the database, the frequency of changes to the measurement system underlying the scale is no longer significant.

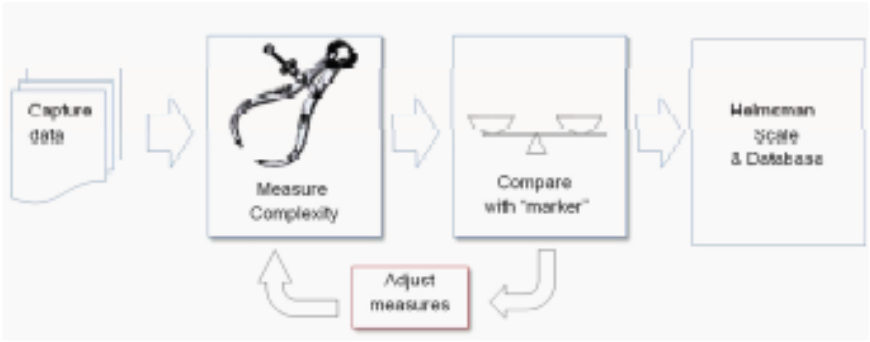

Exhibit 2. Underlying approach to the Helmsman Scale

Area	Description	Main sub-factors
Project Context	Factors that create the organisational context for the project	Stakeholder complexity Project Role and expectations Size of paradigm shift
Sociological Factors	Issues relating to the acceptance and impact of change on people; staff, customers, regulators, competitors, community	Breadth of cultures involved Depth of change Numbers impacted
Ambiguity	Lack of clarity factors which increase complexity due to lack of direction or information	Uncertainty around approach, requirements, methods, costs and direction
Technical Complexity	Technical issues that create complexity for the project	State of technical development, underlying complexity of technology, technical challenges, integration challenges
Project Management Complexity	Complexity created by the intricacy of the project,	Contract complexity, resource and facilities required, schedule and roadmap complexity, experience of the project team