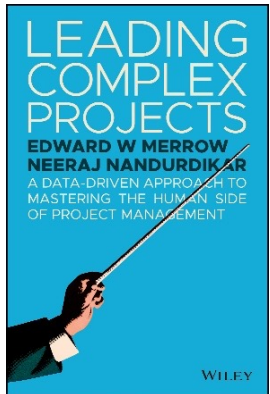


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Advancing Project Knowledge



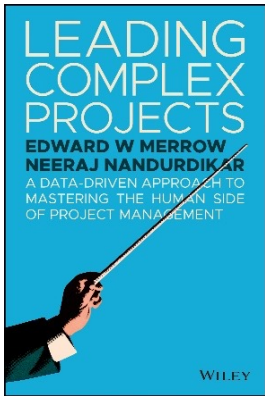
Leadership in Complex Projects

Vienna Projects Academy

Summarized & Presented By: Nekkhl Mishra
6th September 2023



Outline



The Need for Leadership

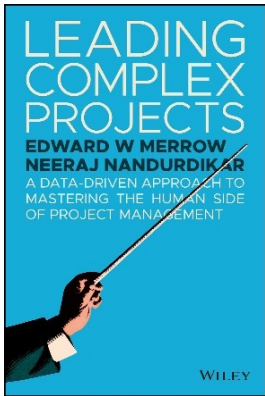
Research Findings

Traits That Matter

What Should Leaders Focus on

Summarizing Qualities of Effective Leaders

Outline



The Need for Leadership

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Most Large Projects are Complex in All Three Dimensions

Most Common Source
of organizational
complexity

Scope Complexity

Occurs when a project has a number of distinct elements, drawing on different technical disciplines, all of which must be fully and carefully coordinated to produce a valuable result

Correctly articulating (and communicate) how one organization's work influences the work of the other groups

Most Large Projects are Complex in All Three Dimensions

Driven by scope and/or
functional organization

Scope Complexity

Occurs when a project has a number of distinct elements, drawing on different technical disciplines, all of which must be fully and carefully coordinated to produce a valuable result

Organizational Complexity

When a number of separate teams are required to execute the scope

Also created in project systems that organize by function rather than by project teams led by an authoritative director

Organizational complexity is what changes the individual from a leader of doers to a leader of leaders

Most Large Projects are Complex in All Three Dimensions

Scope Complexity

Occurs when a project has a number of distinct elements, drawing on different technical disciplines, all of which must be fully and carefully coordinated to produce a valuable result

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Also created in project systems that organize by function rather than by project teams led by an authoritative director

Shaping* Complexity

When a project has difficult context (location, location, location!!), hard to form business cases, significant number external (governments, authorities, banks etc.) and/or internal stakeholder organizations (strategic, etc.)

Getting diverse and often quarrelsome stakeholders to follow willingly and even enthusiastically

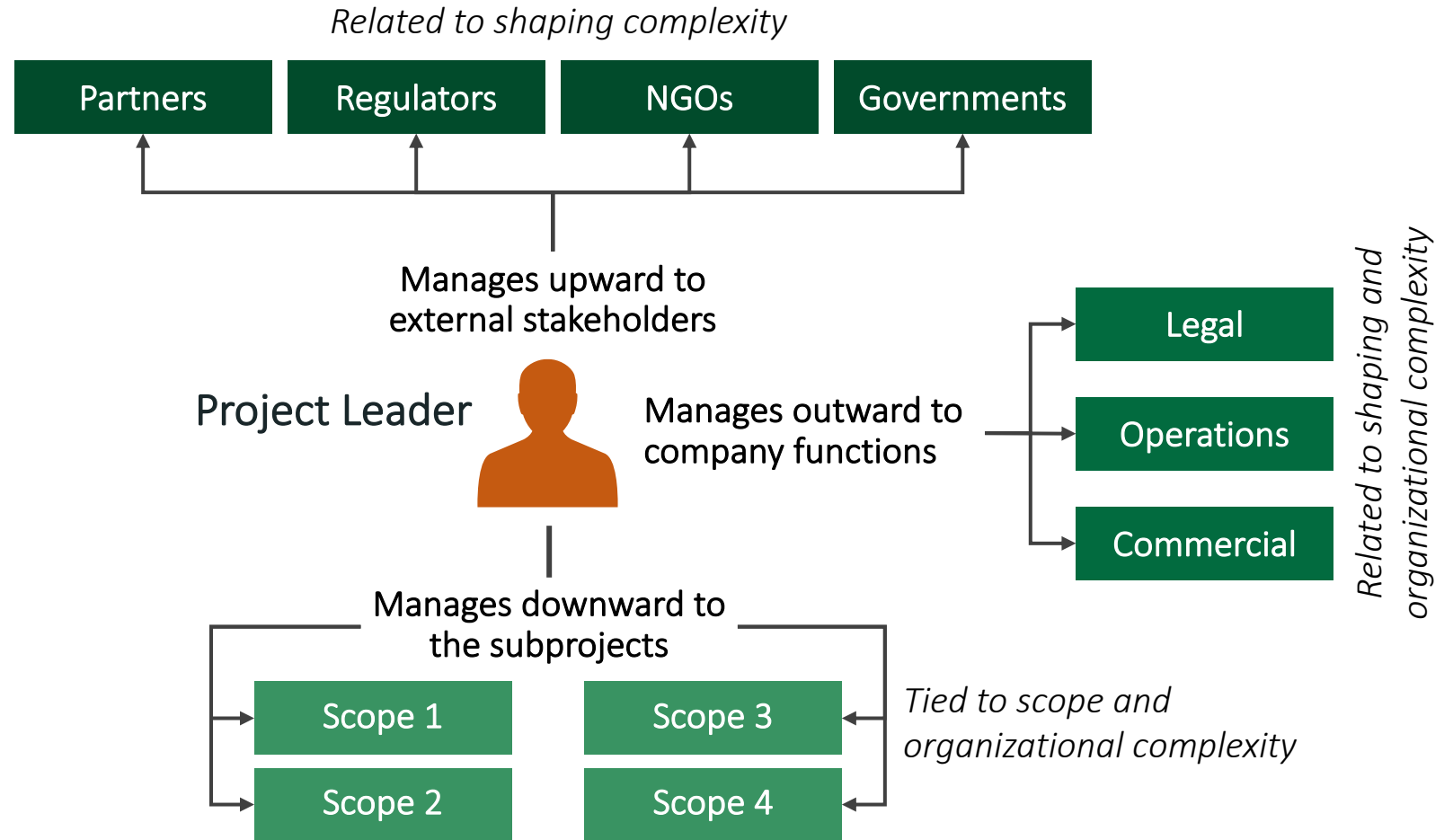


The Opportunity Shaping Process

*Shaping reduces turbulence in the project environment that leads to changes and disruptions and ultimately project failure

Leadership Is Difficult in a Complex Project

Managing Up, Over, and
Down means
Leadership comes into
play



Accountability without Authority means generating “followership”—getting people to voluntarily cooperate to make a project succeed

Management v. Leadership

The Need for Leadership
is Generated by
Complexity

Project Management

Good and clear planning of deliverables

Proper allocation of work to the right people and contractors

Sequencing all work correctly to ensure smooth flow

Holding everyone accountable through good controls

vs.

Project Leadership

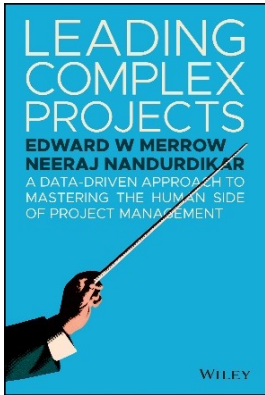
Articulating a clear vision for the project

Getting all stakeholders to agree and cooperate

Generating strong followership from the team

Being a leader of leaders

Outline



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Our Basic Thesis for IPA's Leadership Research

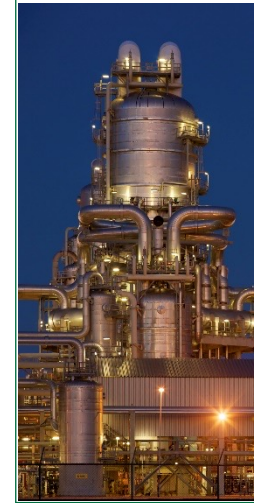
- As projects become more complex, the manager role shifts from manager to leader
- Complex project leaders are often selected based on their success with middle-size projects
 - Manager and leader skillsets are different
 - Manager and leader personality requirements are different
- Mismatch of requirements is a major contributor to poor complex project performance

What distinguishes the successful leaders from the unsuccessful leaders of major projects?



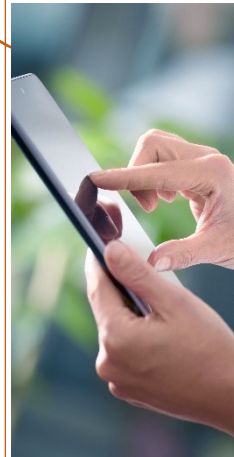
Complex Projects

- 56 current and past projects for the PLs that answered surveys
- Average Authorization Year: 2011
- Average Project Cost (2016 US\$): 1.55 billion



Non-Complex Projects

- 422 projects for the 262 PLs that answered surveys
- Average Authorization Year: 2009
- Average Project Cost (2016 US\$): 200 million

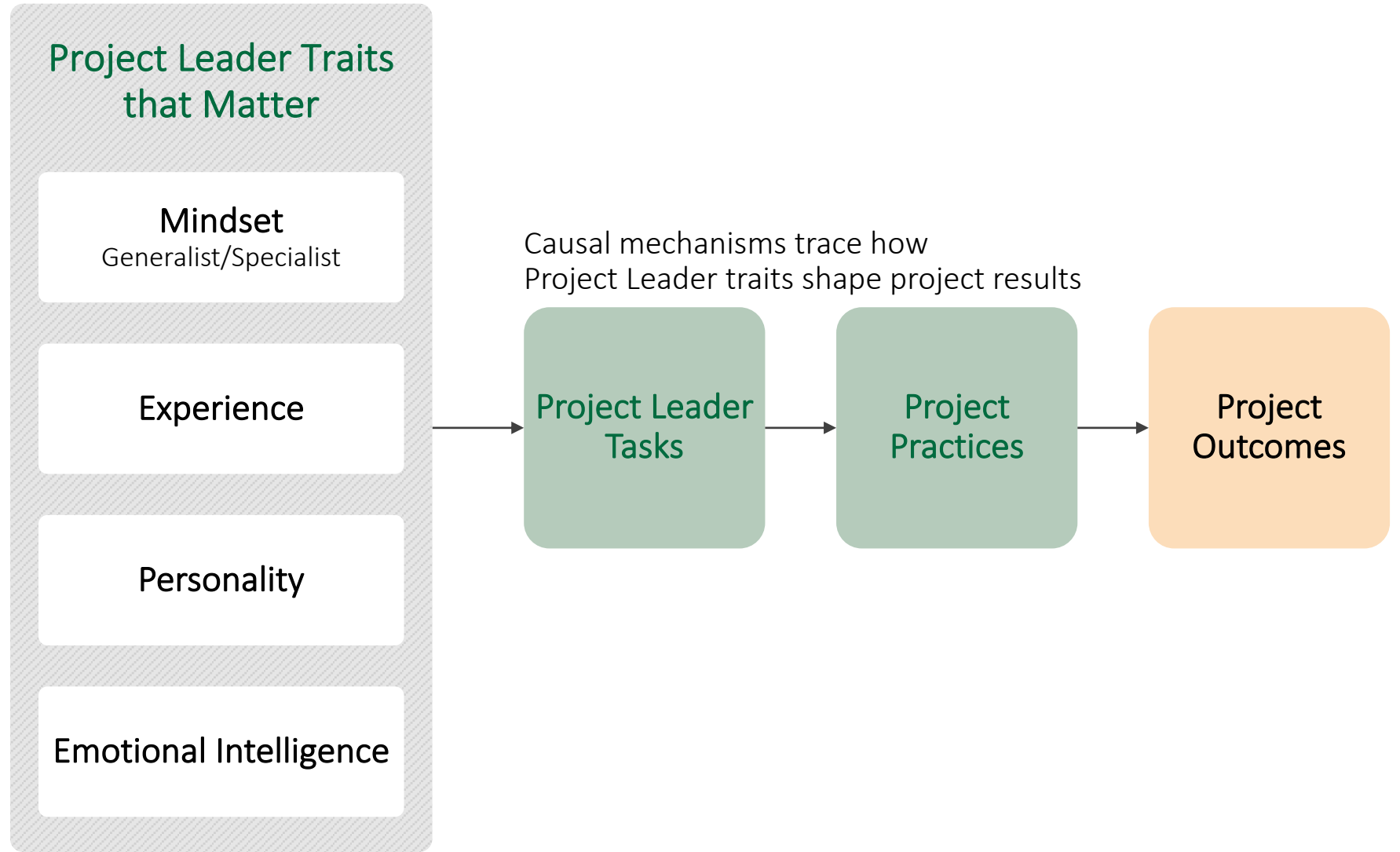


Project Leadership Survey

- Online survey of PLs in the Field Development Database
- 56 PLs responded out of ~100 surveys sent
- Includes PLs from 17 companies
- 160+ questions around background personality (Big 5 Attributes), and leadership
- About 30-40 minutes to complete

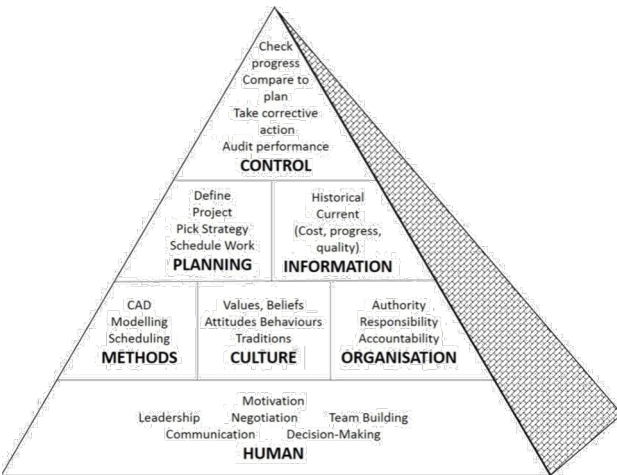
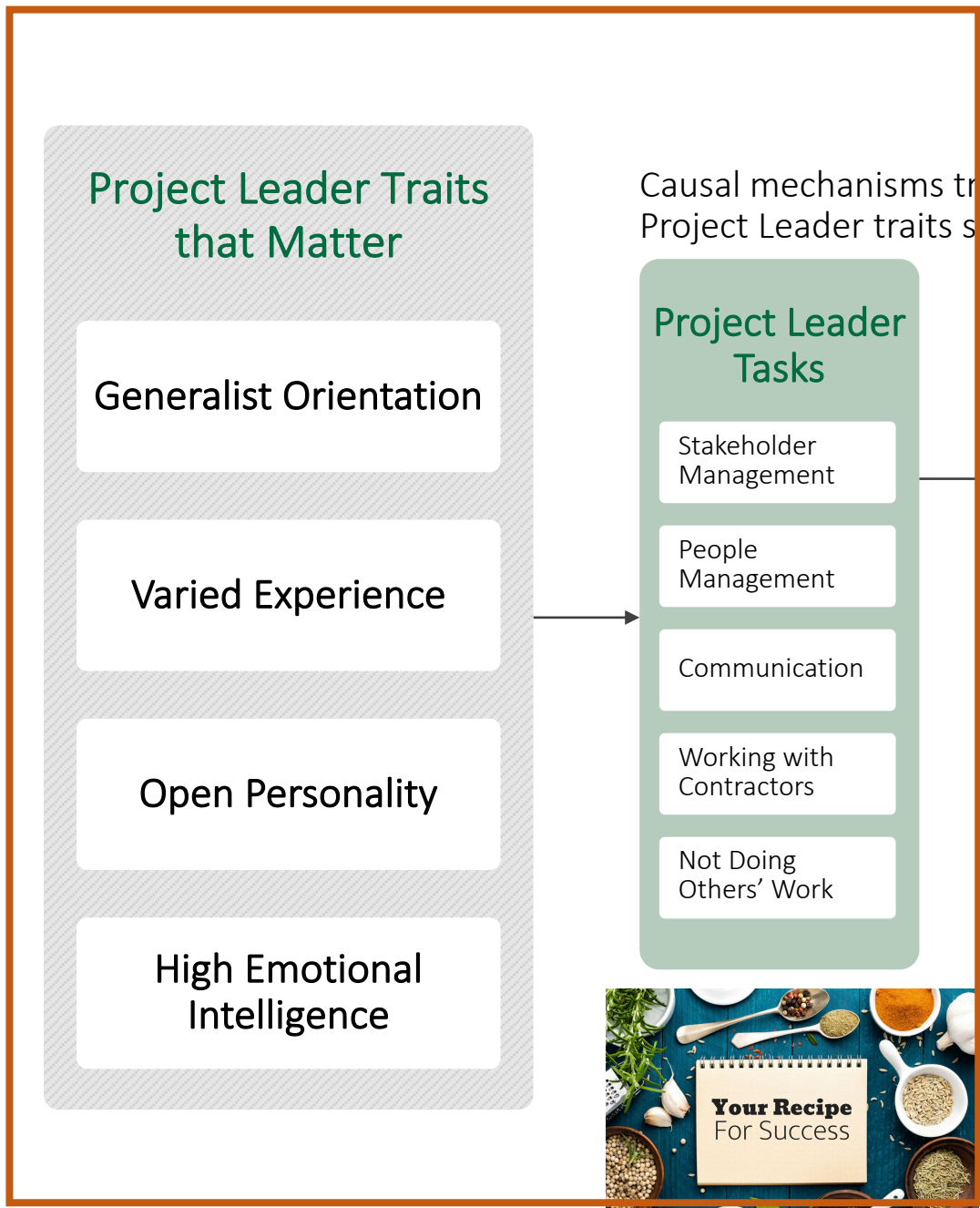
Building Blocks of Project Leadership

From Traits to Tasks
and Practices

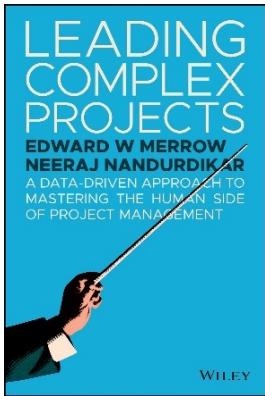


Building Blocks of Project Leadership

Key Findings



Outline



The Need for Leadership

Research Findings

Traits That Matter

What Should Leaders Focus on

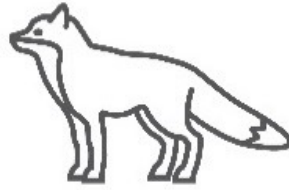
Summarizing Qualities of Effective Leaders

Traits That Matter

Mindset (1) & Experience (2)

Measuring Mindset

Foxes & Hedgehogs –
Used by Isaiah Berlin –
useful to understand
thinking and approach
to decision making



Foxes are generalists,
eyes-to-the-horizon types
that do not like to spend too
much time on a single issue



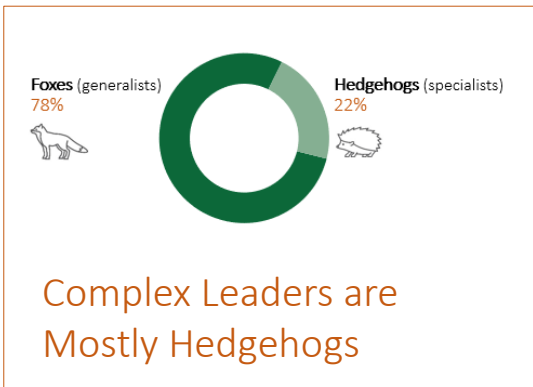
**Hedgehogs focus on a
particular subject** and know it
extremely well; they specialize
and are truly experts

As a group, engineers *tend*
toward being Hedgehogs

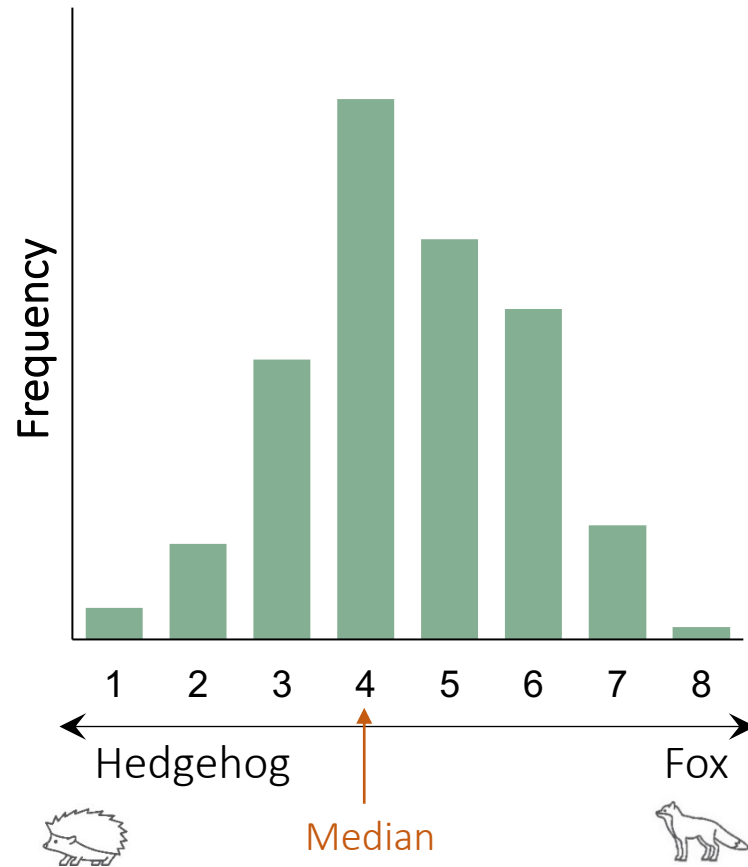
*“A Fox knows many
things, but a Hedgehog
knows one important thing”*

–Archilochus c.680-645BC

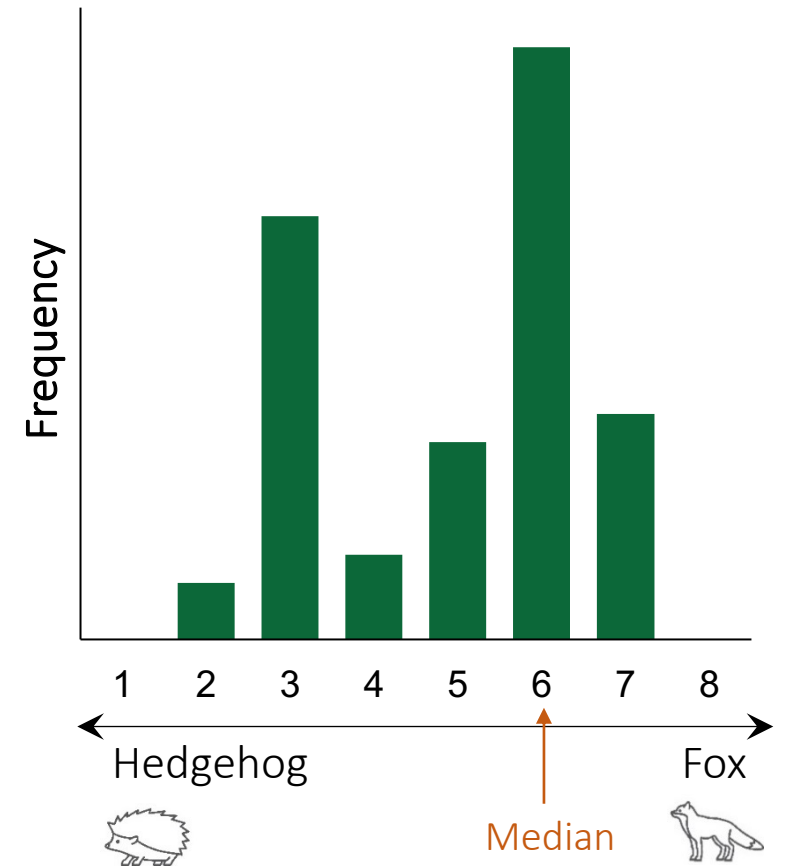
Project Leaders Must be Foxes to Cope With Project Complexity



Project Leaders for **Non-Complex** Projects

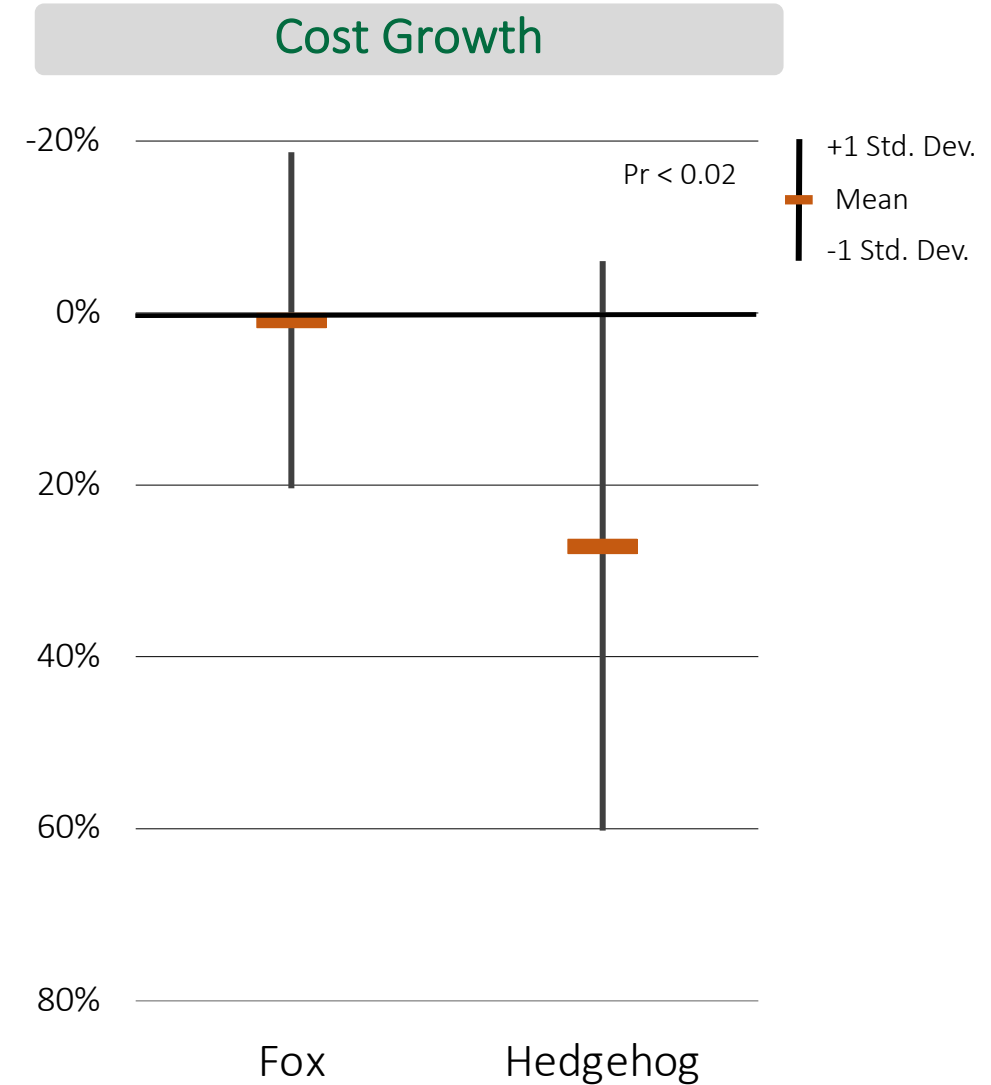
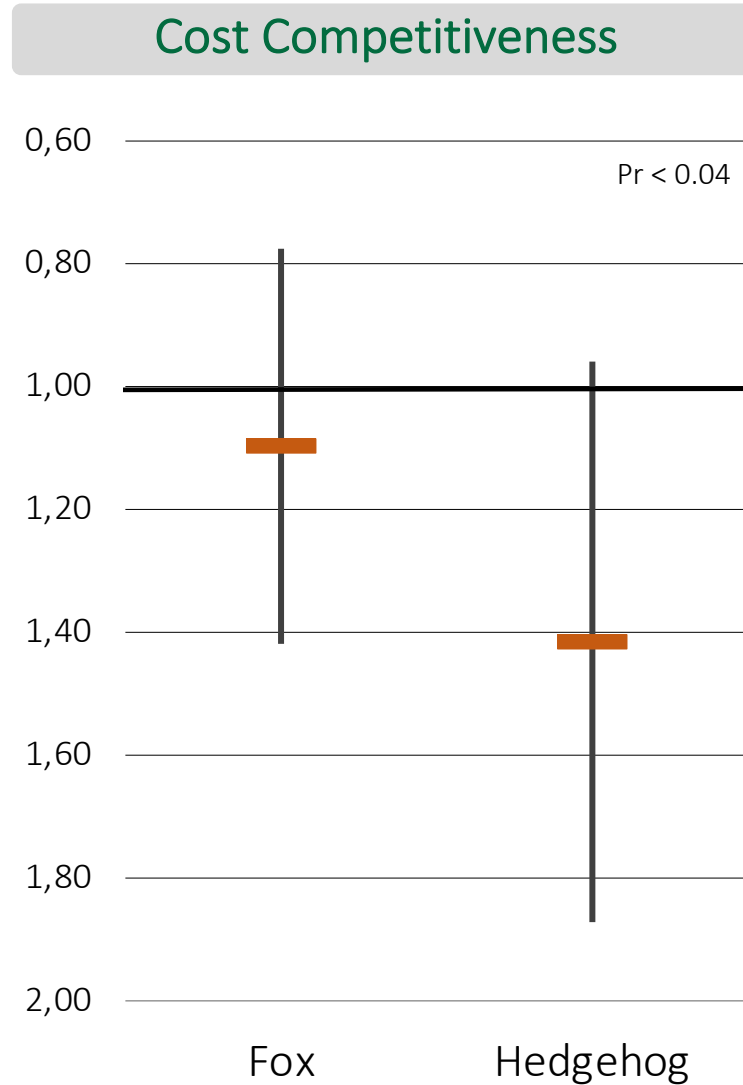


Project Leaders for **Complex** Projects



Fox vs. Hedgehog

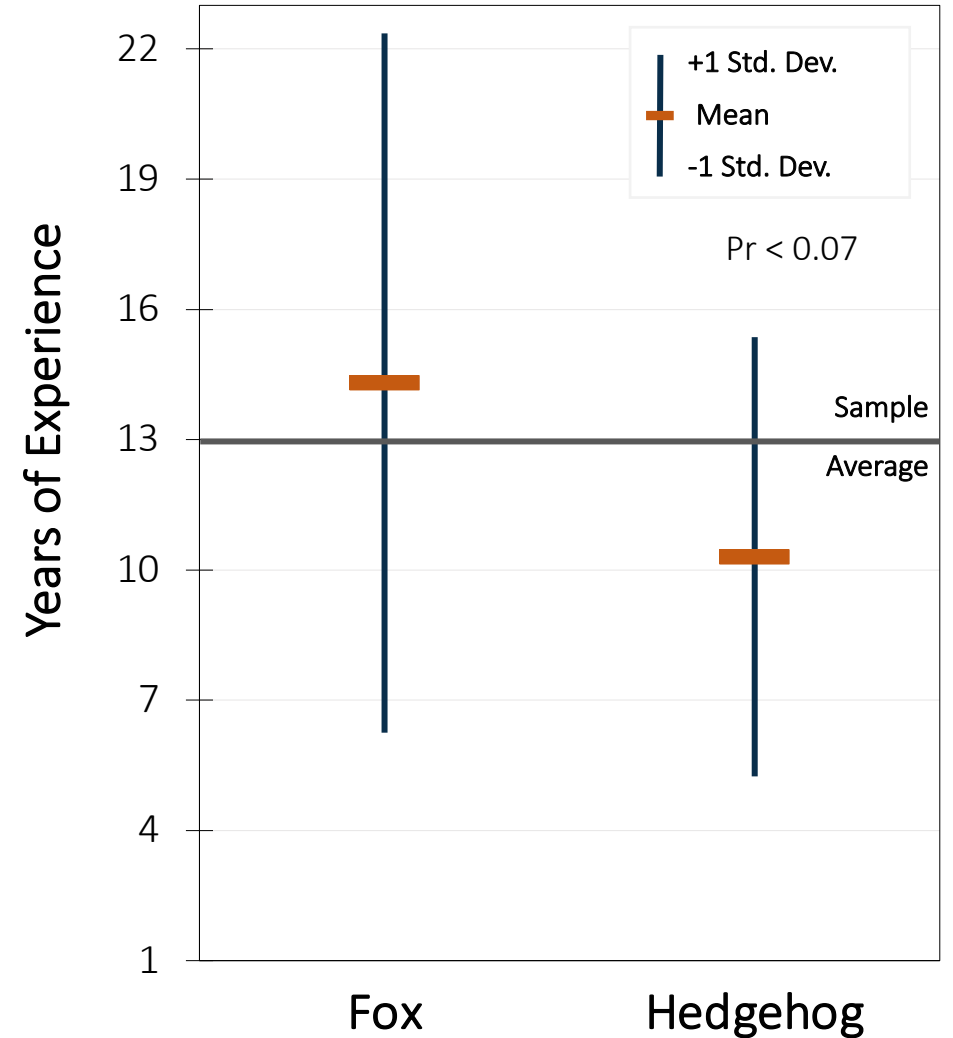
Foxes Deliver on Cost –
delta is 30 percent with
less variability



The Foxes Were More Experienced

The Interesting
Question Is Why?

- Personality characteristics are very durable and
- Because foxes are more likely to be successful and enjoy complex projects while hedgehogs are not, the effect of time is to winnow out the hedgehogs



Experience

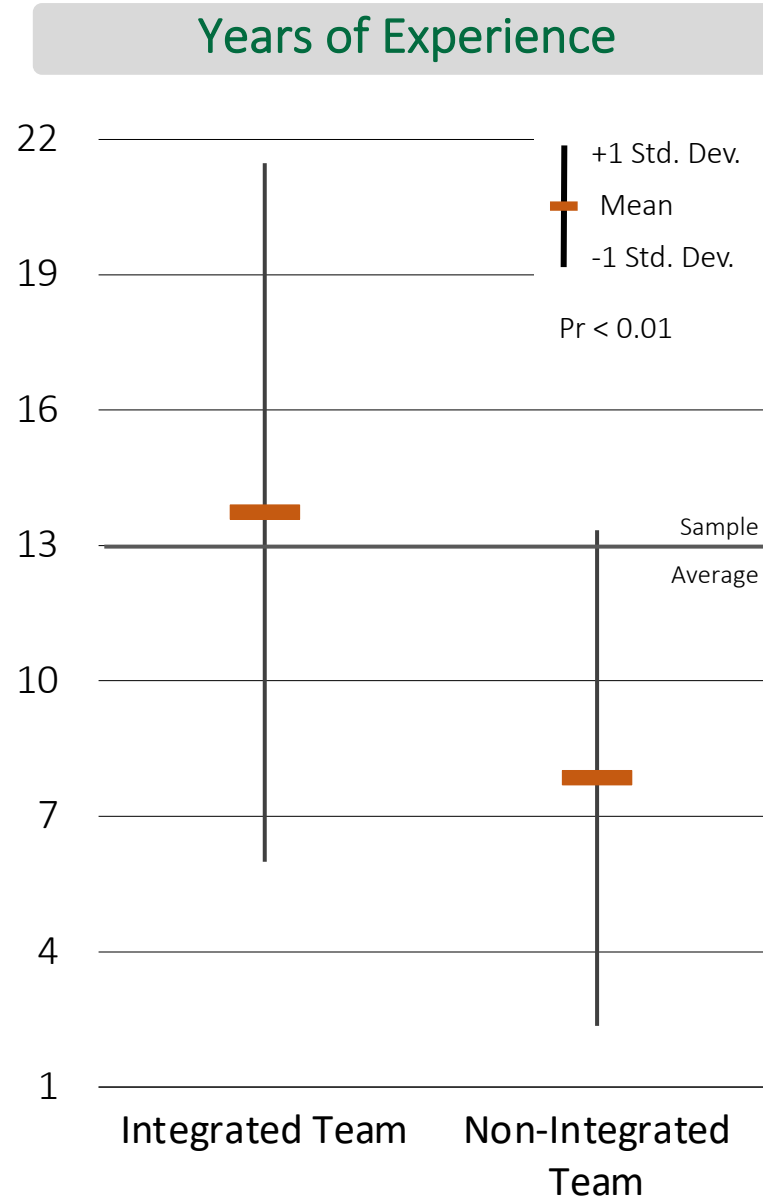


- Should be more than getting old
- Career path and progression
- Experience in other industries
- We expect some backgrounds are more helpful to leaders of complex project than others

Experience is only valuable if one has the capacity to learn from them and we did see the capacity to leaden and improve on mistakes...

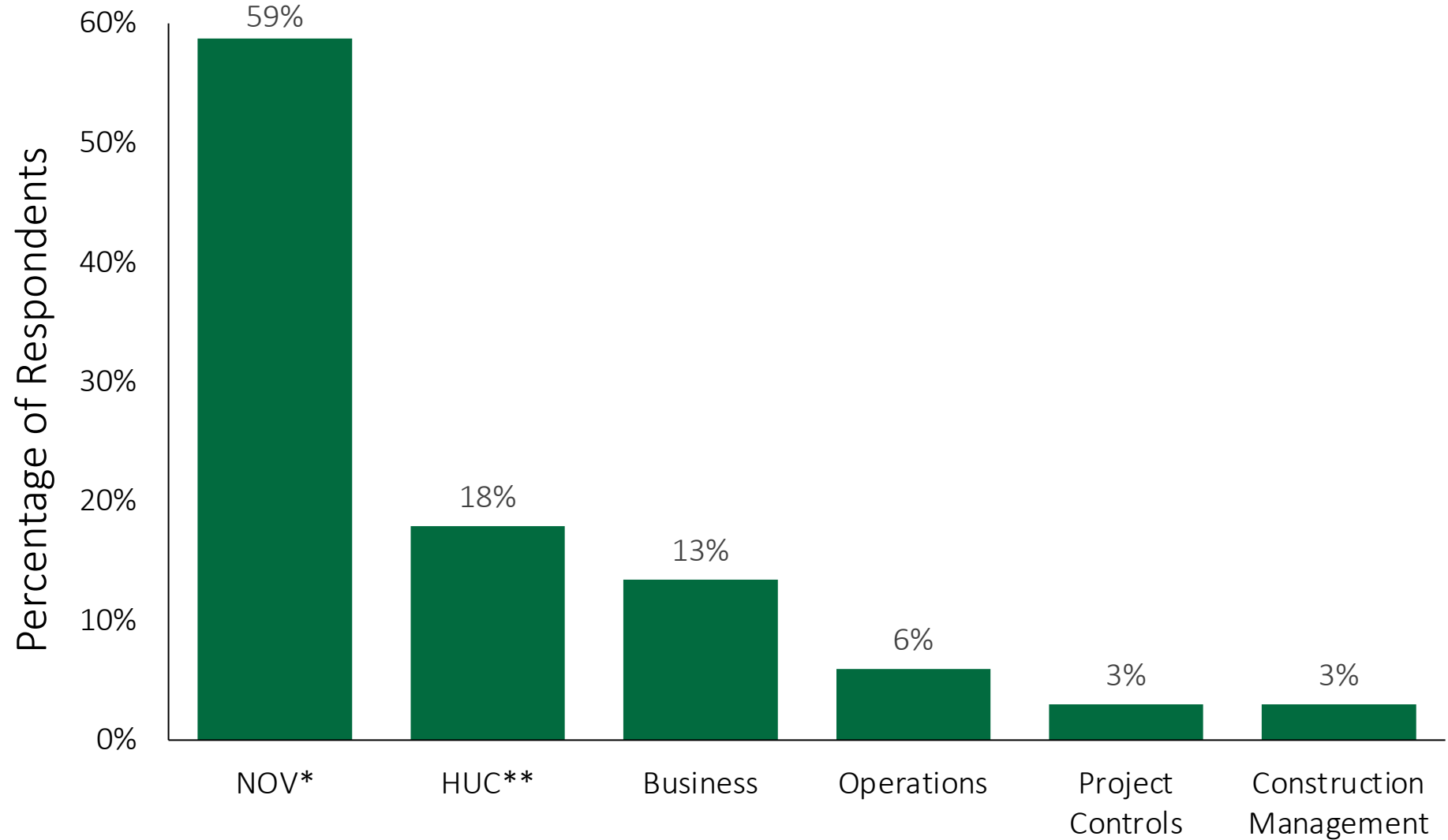
An Example of Learning...

Experienced Leaders Fill All Roles



- When teams are missing one or more key functions, **projects fail**
- Experienced project leaders know this:
 - Push for the right team members from the moment they join the project
 - Review the team makeup as one of their first activities on a new project
 - Insist all functions involve themselves at the right time

Experience in Roles Other Than Project Manager



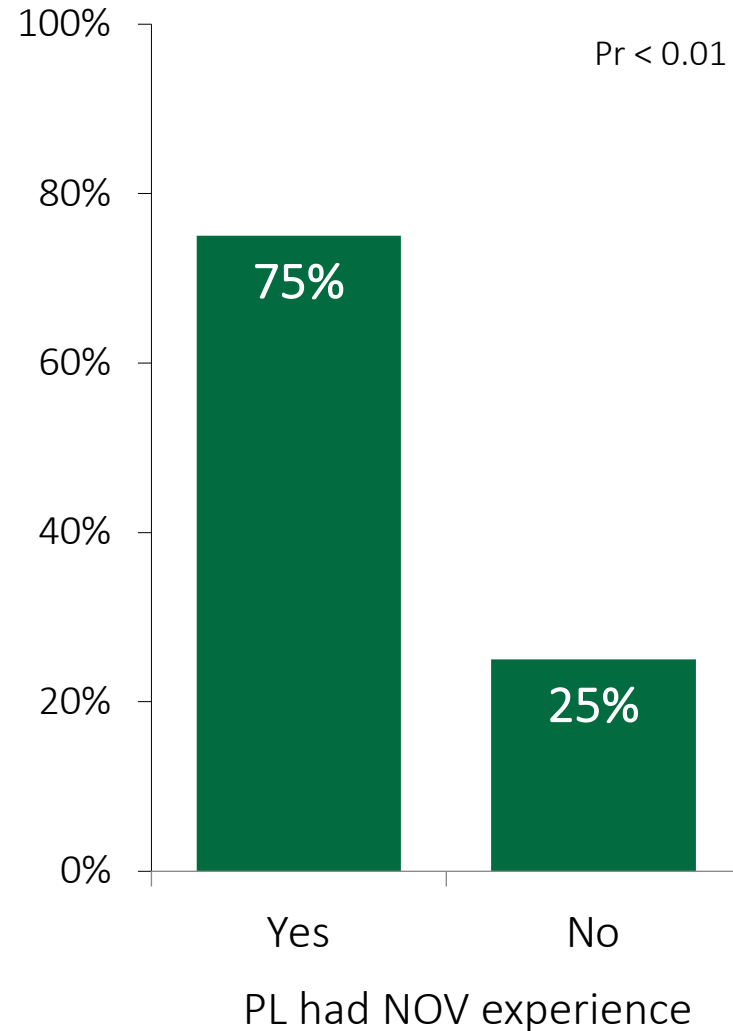
*Non-Operated Venture: A company is part of a joint venture, but not as an operator

**Hookup & Commissioning

Varied Experience Expands Your Leader Toolkit

Example Commercial
Industry: Non-Operated
Venture

Successful Project Leaders



- NOV liaison is responsible for watching and reporting back to their own company how well the project is being run
- Time on NOVs is likely a period of intense learning for (prospective) project leaders
- Opportunity to watch others make mistakes
- Chance to reflect on what works and what doesn't

Traits That Matter

Personality (3) & Emotional Intelligence (4)

Temperament

Personality and
Emotional
Intelligence
shape an
individuals
temperament

The personality characteristics (some might argue biology) that make certain things easier, or more difficult, for different individuals

Personality and Emotional Intelligence

Personality

Reveals information about:

- Attitudes
- Values
- How behavior manifests in certain situations

Is stable during the “prime” working years of a person’s life

Emotional Intelligence (EI)

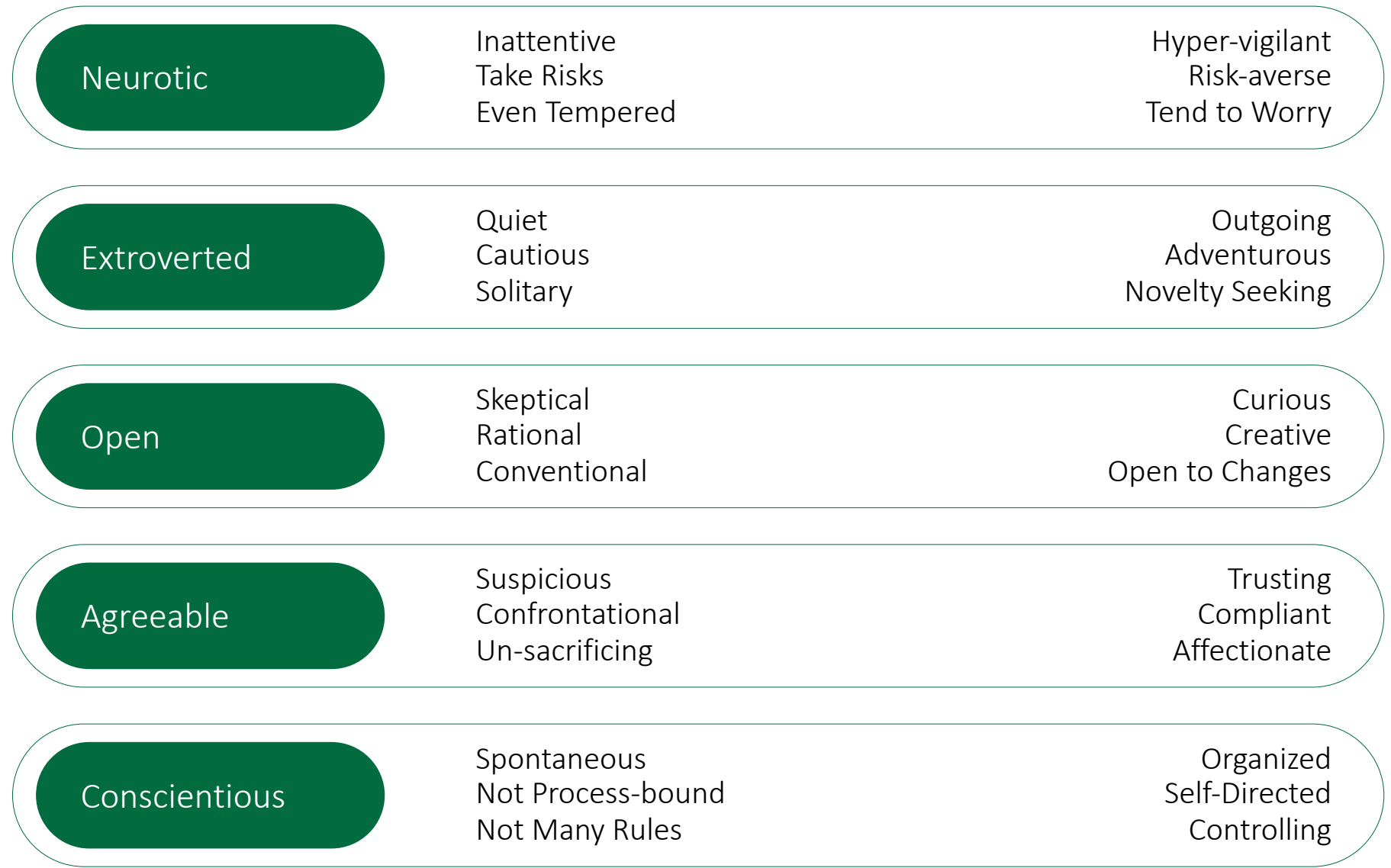
The degree an individual can monitor emotions, discriminate between different emotions, and use emotional information to influence behaviors

Evolves over time through experiences and development

Understanding personality and EI attributes shared by top performing leaders can help us understand the behaviors that support performance

The Five Factor Model of Personality

A Well-Established and
Validated Instrument



Less

More

The Role of Personality

- Our average project leader was close to the middle on most attributes of personality measured by the Five Factor Model
- The averages of the sample hide the importance of personality
- Some traits are associated with success and others with failure
- Let's look at the best of our projects and the worst...

B Better

Achieved cost or schedule target

Cost Index: ≤ 1.00 OR

Execution Schedule Index: ≤ 1.00

W Worse

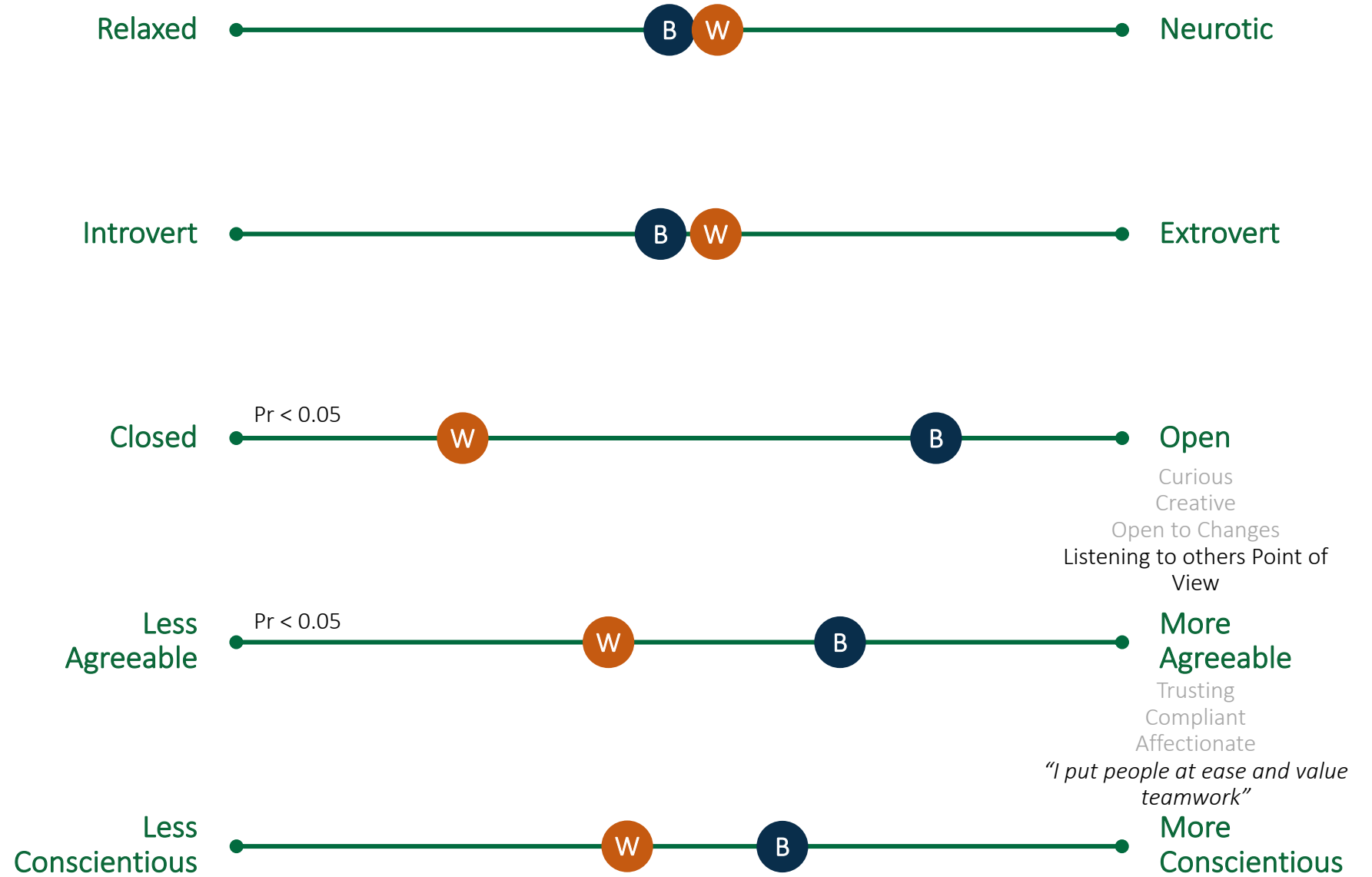
Did not meet cost and schedule targets

Cost Index: > 1.00 AND

Execution Schedule Index > 1.00

Personality Profiles for the Best and Worst Project Leaders

B = Better **W** = Worse



The Emotional Intelligence Scales

Another Well-Established and Validated Test

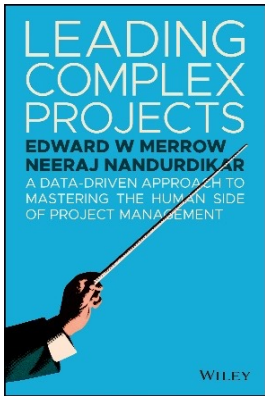
Scale Name	Description
Recognize Own Emotions	How quickly and easily does a person recognize their own emotional situation?
Recognize Others' Emotions	How easily does one grasp how others are responding emotionally to a situation?
Regulating Emotions	How good is one at controlling one's own emotions?
Social Skills	How well does one get along with others and make them feel at ease?
Use Emotions	Does a person know how to use emotions to motivate others?
Optimism	Is that glass half full?

Schutte, N.S, Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J. and Dornheim, L. (1998) "Development and validation of a measure of emotional intelligence", *Personality and Individual Differences* 25, 167-177.

Emotional Intelligence and Success

Scale	Sign	Z-score with Success	Statistical Significance	Comment
Recognize Own Emotions	+	1.96	.05	Successful leaders have good self-awareness
Recognize Others' Emotions	+	1.68	.09	Relationship to project success is obvious
Regulating Emotions	+	0.18	.86	This is the only EI scale that shows no relationship
Social Skills	+	1.78	.08	Key to effective teamwork
Use Emotions	+	1.12	.26	Directionally correct; some components are significant
Optimism	+	2.0	.05	This is a measure of emotional strength in face of difficulties

Outline



The Need for Leadership

Research Findings

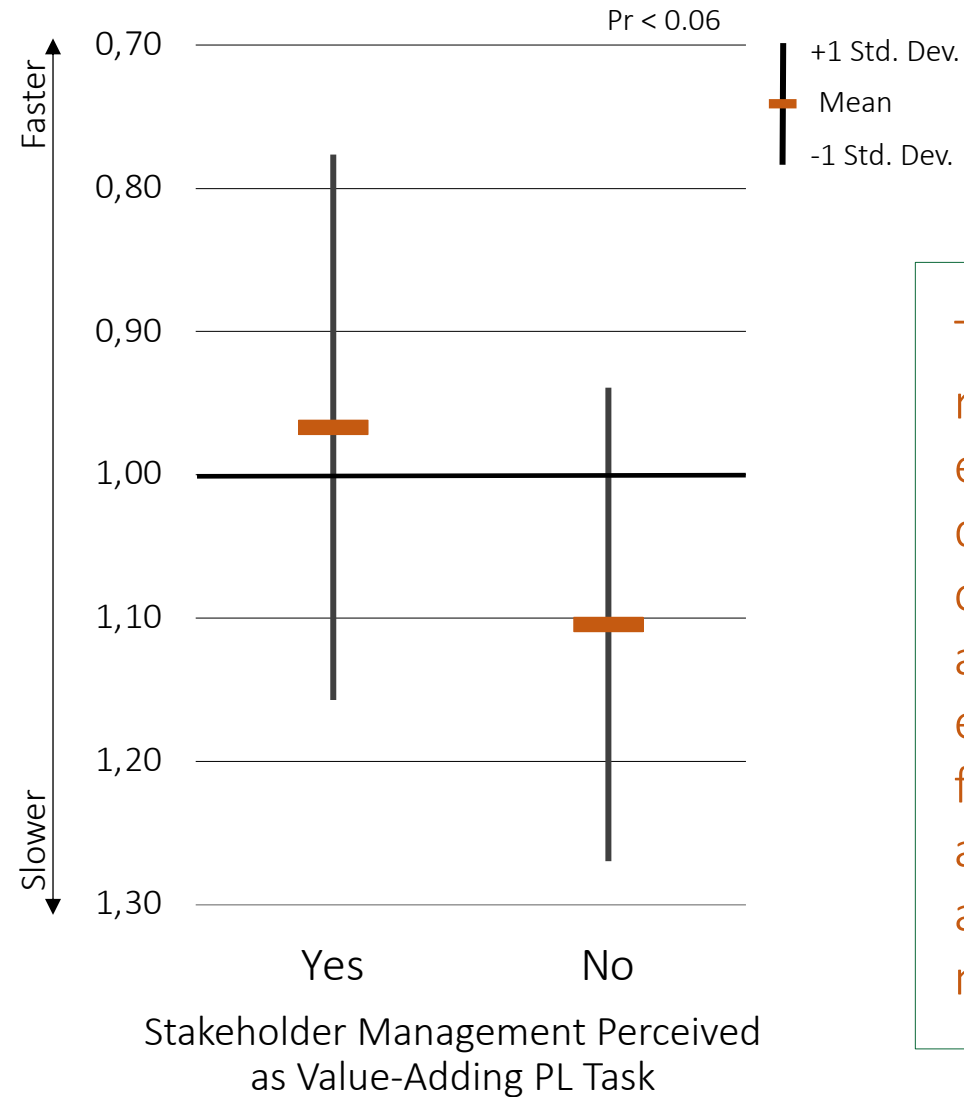
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Valuing Stakeholder Management is Key

Execution Schedule Index



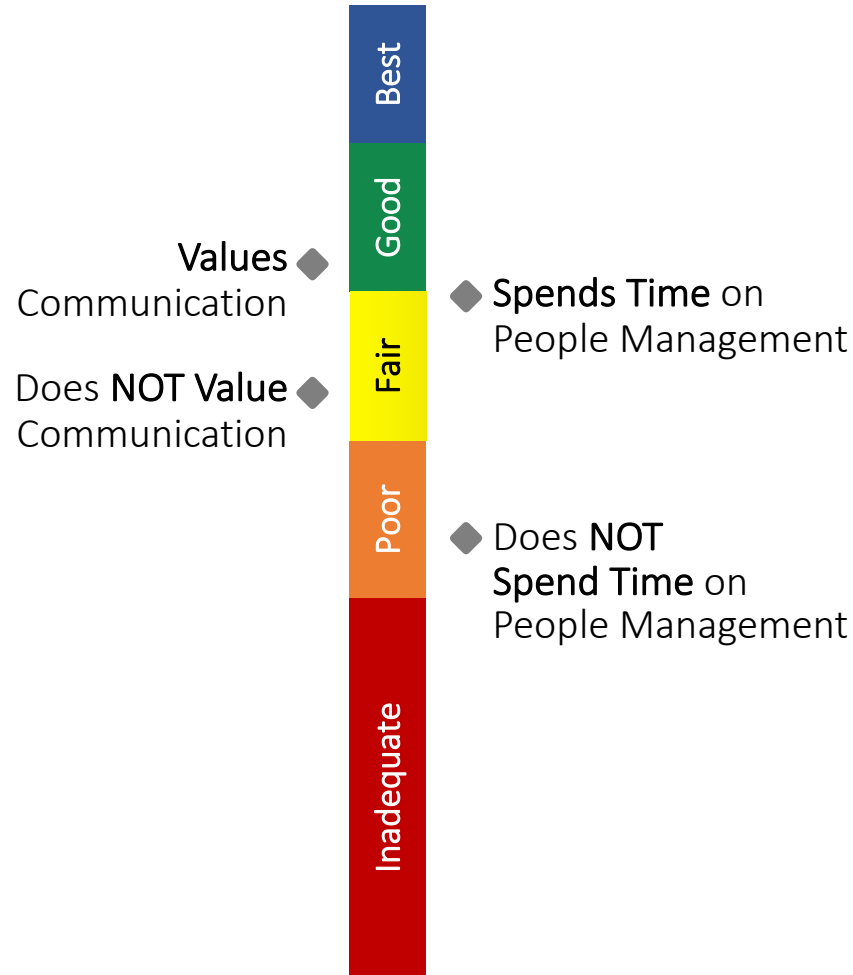
Those who are better at recognizing others' emotions (Pr.<.023), quickly identifying their own emotions (Pr.<.01) and regulating their emotions (Pr.<.01) will find stakeholder alignment tasks easier and therefore spend more time doing it

Successful PLs Value Communication and People Management Core to Project Success

FEL Index

Pr < 0.05

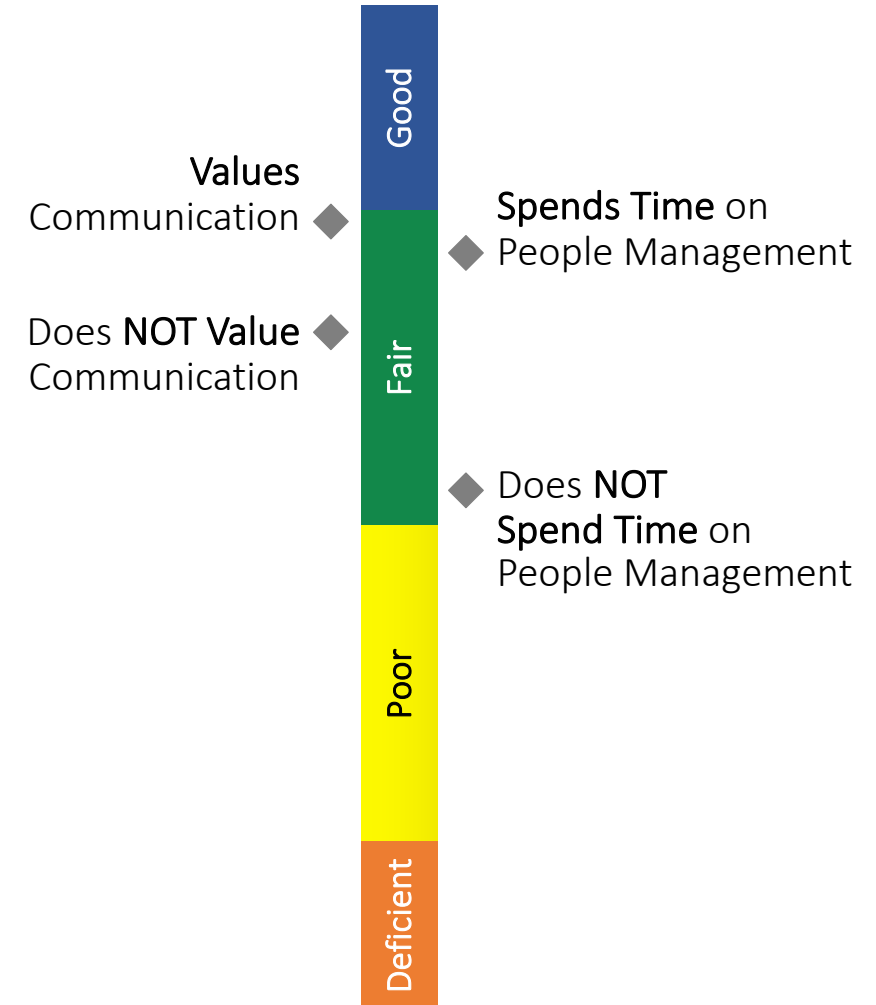
Pr < 0.001



Project Controls Index

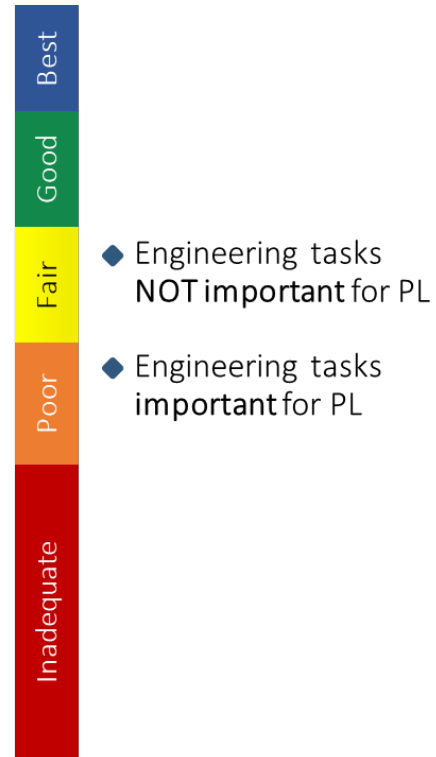
Pr < 0.04

Pr < 0.001

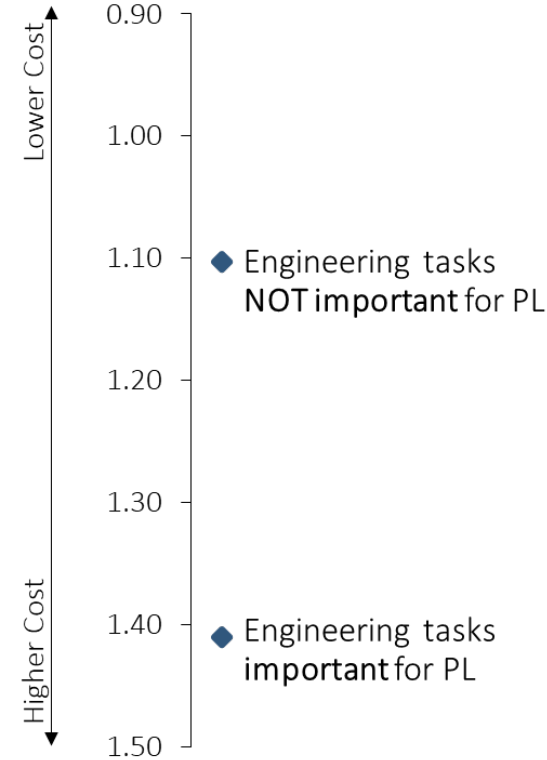


Complex Project Leaders Should Not Perform Technical Tasks or Project Controls

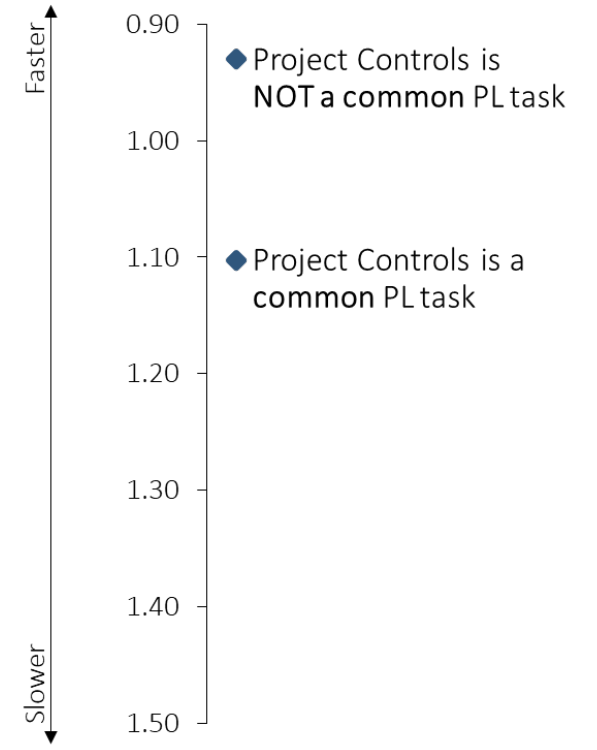
FEL Index Pr < 0.06



Cost Index Pr < 0.05



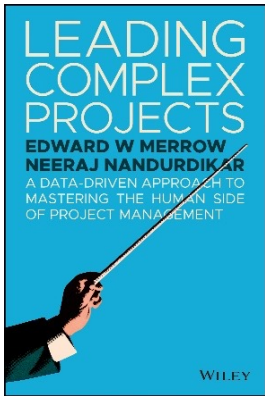
Execution Schedule Index Pr < 0.02



Listening and Decision-Making

- Successful leaders manage to balance a paradox:
 - Good project leaders listen to everyone, but
 - Jealously guard their decision-making prerogatives
- The key is that they are genuine listeners:
 - They will change their mind if the evidence is good
 - They never do “fake listening”
- But they and they alone will make the final decisions
 - No need for consensus
 - No group-think
 - No going along to be a good sport

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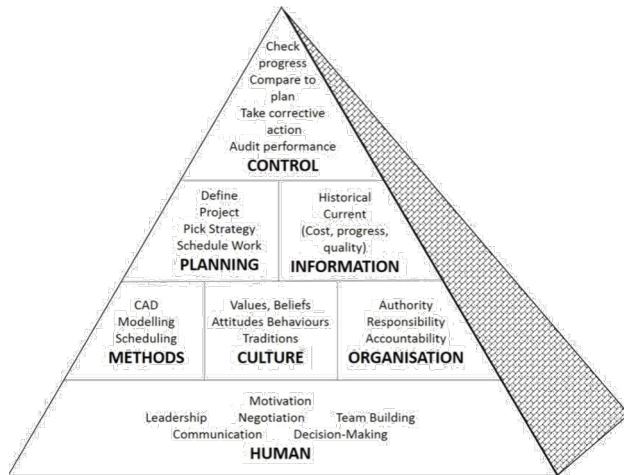
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Key Findings



Project Leader Traits that Matter

Generalist Orientation

Varied Experience

Open Personality

High Emotional Intelligence

Causal mechanisms trace how Project Leader traits shape project results

Project Leader Tasks

Stakeholder Management

People Management

Communication

Working with Contractors

Not Doing Others' Work

Project Practices

Aligned Stakeholders

Integrated Teams

Complete Front-End Loading

Strong Owner Controls

Project Outcomes

Cost Effective

On Time, On Budget

Work as Intended



The hard stuff is easy.
It's the soft stuff that is really hard.

—Leader of the most complex successful gigaproject we have evaluated

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