



**A
GREAT
DECISION
EVERY TIME!**



**Organizational Transformation Challenge:
End-to-End Integration of DQ in Large Capital Projects**

Carl Spetzler, Chairman Strategic Decisions Group

Conference of the Society of Decision Professionals
April 18, 2024

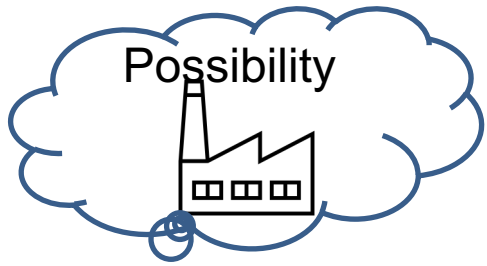
DQ for Maximum VALUE POTENTIAL



Deliver with Fully Aligned Collaborative EXECUTION

Decision Quality (DQ) in Integrated Project Delivery

- The Nature of Large Projects
- DQ in Project Initiation Decisions
- DQ in Project Shaping Decisions
- Establishing a Healthy Decision Culture in Large Projects for Executions Decisions



Why would we do a project? There must be a Prize!



User-Owners



Project Leadership

A Project

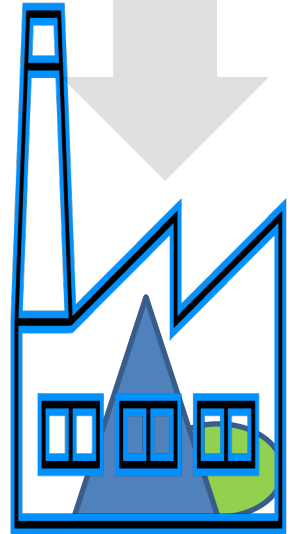
consists of everything it takes to turn the envisioned Possibility into the reality of a Completed, Operating, Transferred Facility

An Attractive Project

generates user-owner value significantly greater than the full cost of the project

A Successful Project

is completed on budget and on time and performs to expectations.

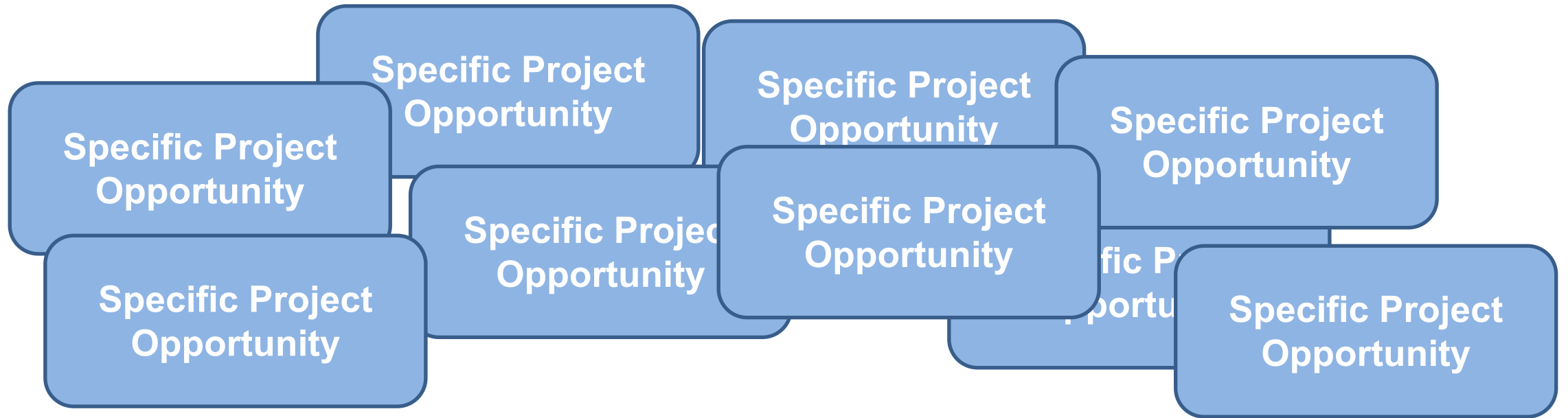


Completed,
Operating,
Transferred
Project

© 2020 by Strategic Decisions Group International LLC. All rights reserved.

Projects have a beginning and an end.

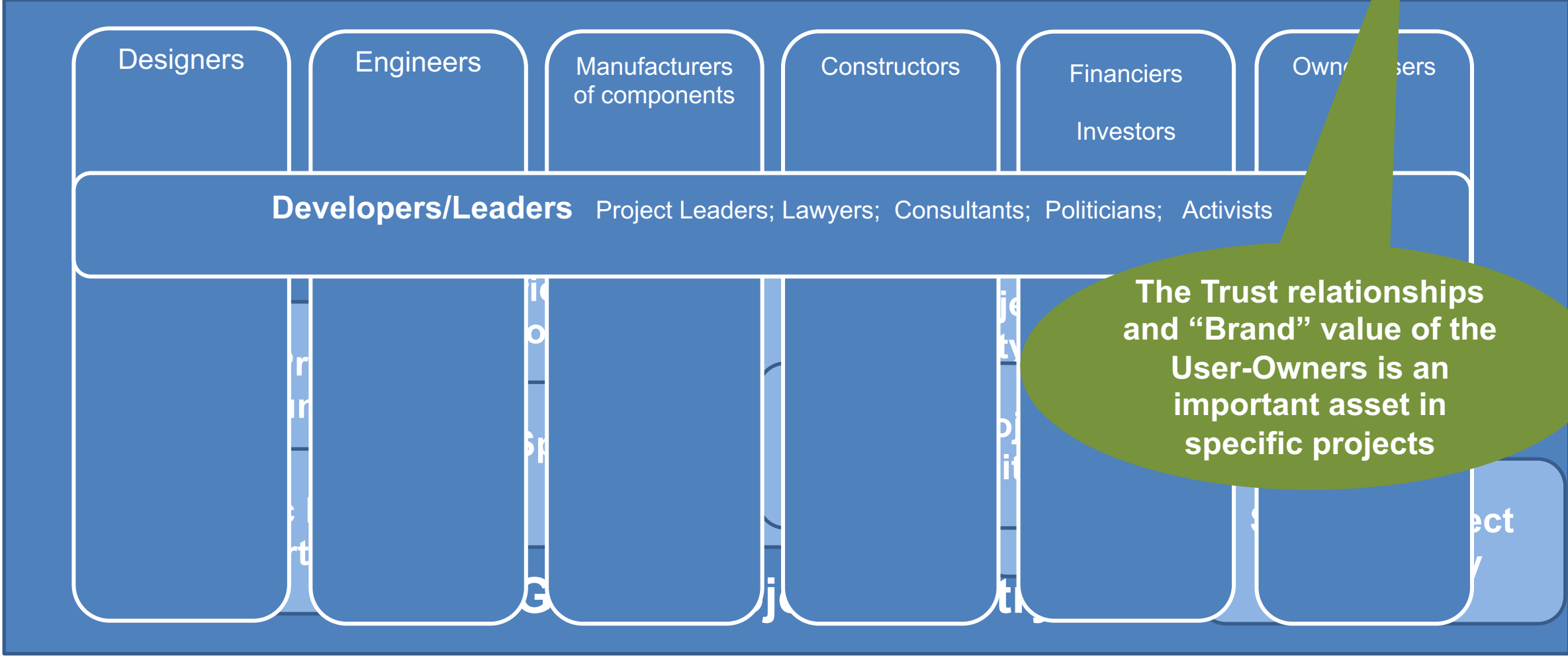
User-Owners usually have a portfolio of project opportunities.



The relationship between project suppliers and user-owners transcends the specific project opportunities.

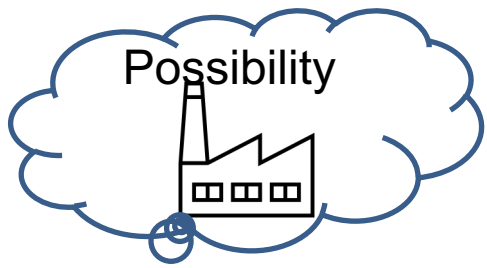


User-Owners

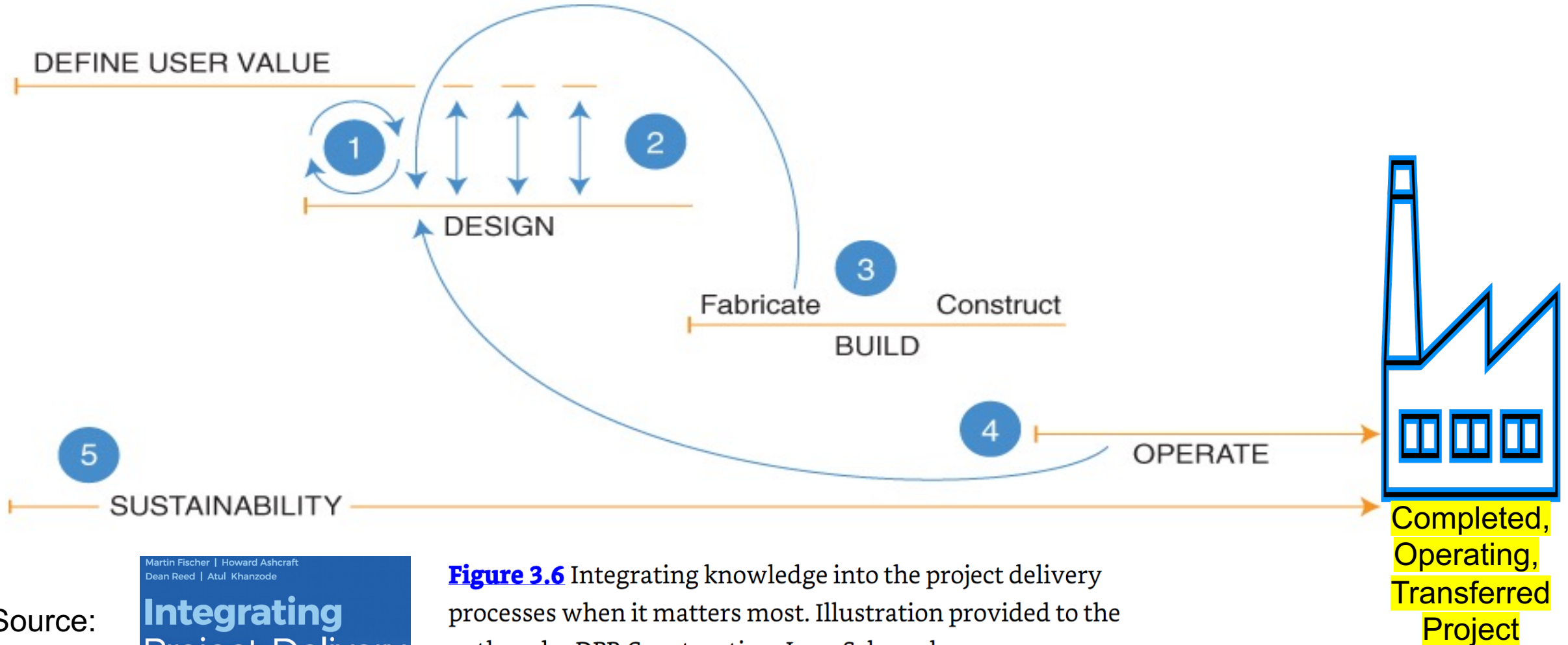


The Trust relationships and “Brand” value of the User-Owners is an important asset in specific projects

© 2020 by Strategic Decisions Group International LLC. All rights reserved.



There are many descriptions of the project delivery process.



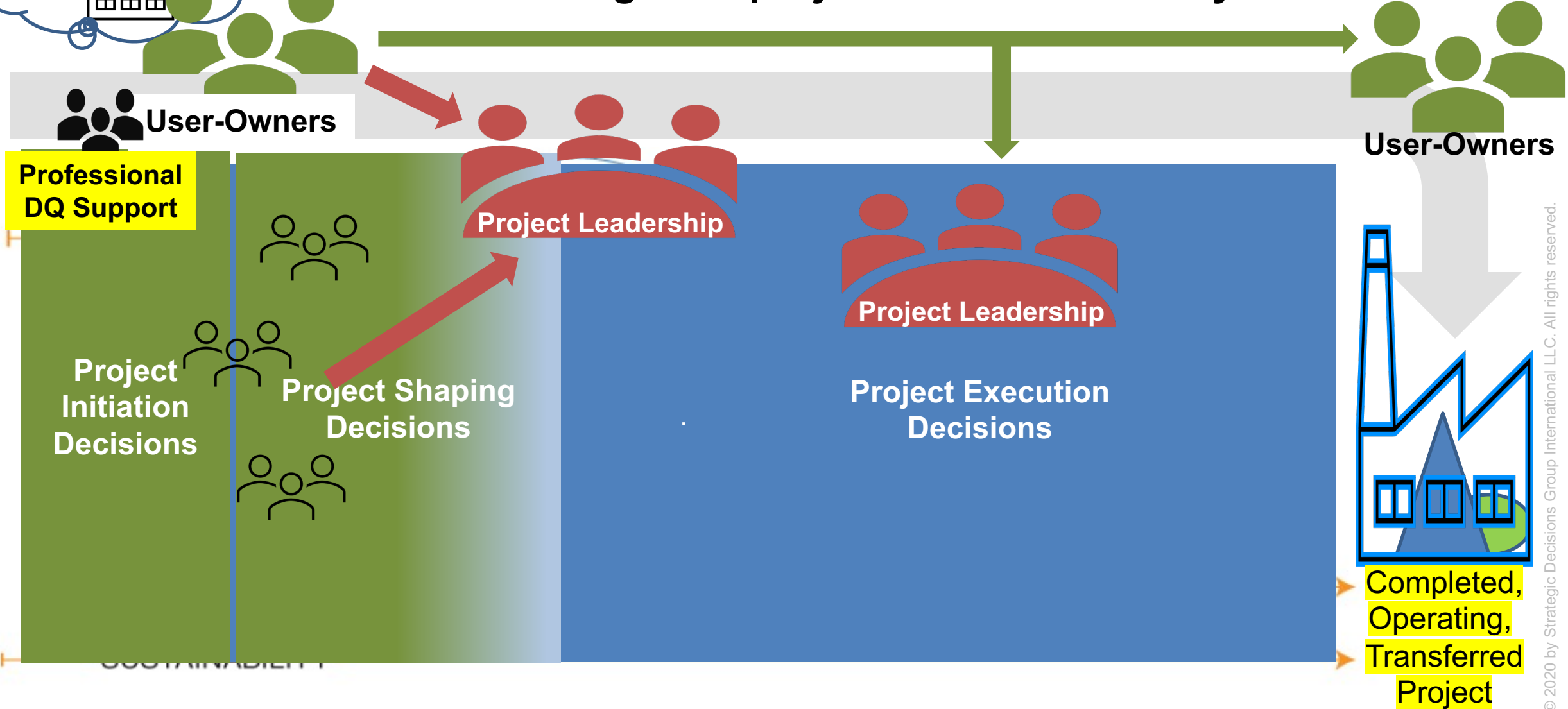
Source:

Martin Fischer | Howard Ashcraft
Dean Reed | Atul Khanzode
**Integrating
Project Delivery**

Figure 3.6 Integrating knowledge into the project delivery processes when it matters most. Illustration provided to the authors by DPR Construction, Lyzz Schwegler.



We need to recognize three significantly different stages of decision making for a project to become reality.



© 2020 by Strategic Decisions Group International LLC. All rights reserved.

Decision Quality (DQ) in Integrated Project Delivery

- The Nature of Large Projects
- DQ in Project Initiation Decisions
- DQ in Project Shaping Decisions
- Establishing a Healthy Decision Culture in Large Projects for Executions Decisions



DQ in project initiation requires a portfolio approach guided by value-and-risk modeling of the full commercial life cycle of the project.



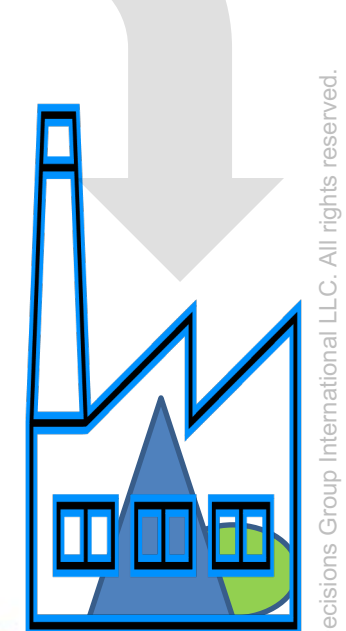
Professional
DQ Support

Project
Initiation
Decisions

- Project Initiation Decisions are driven by the overall value potential of the project
- These decisions are taken in the context of the owner-users' portfolio of opportunities
- The lead owner-user drives this stage:
 - What is the opportunity?
 - What is the value-and-risk potential?
 - Who needs to be part of the owner-user group – and in what way?
 - How does this opportunity compare to others?
 - What would be the major challenges, if we proceeded?
 - Should we proceed to shape up this project?



User-Owners

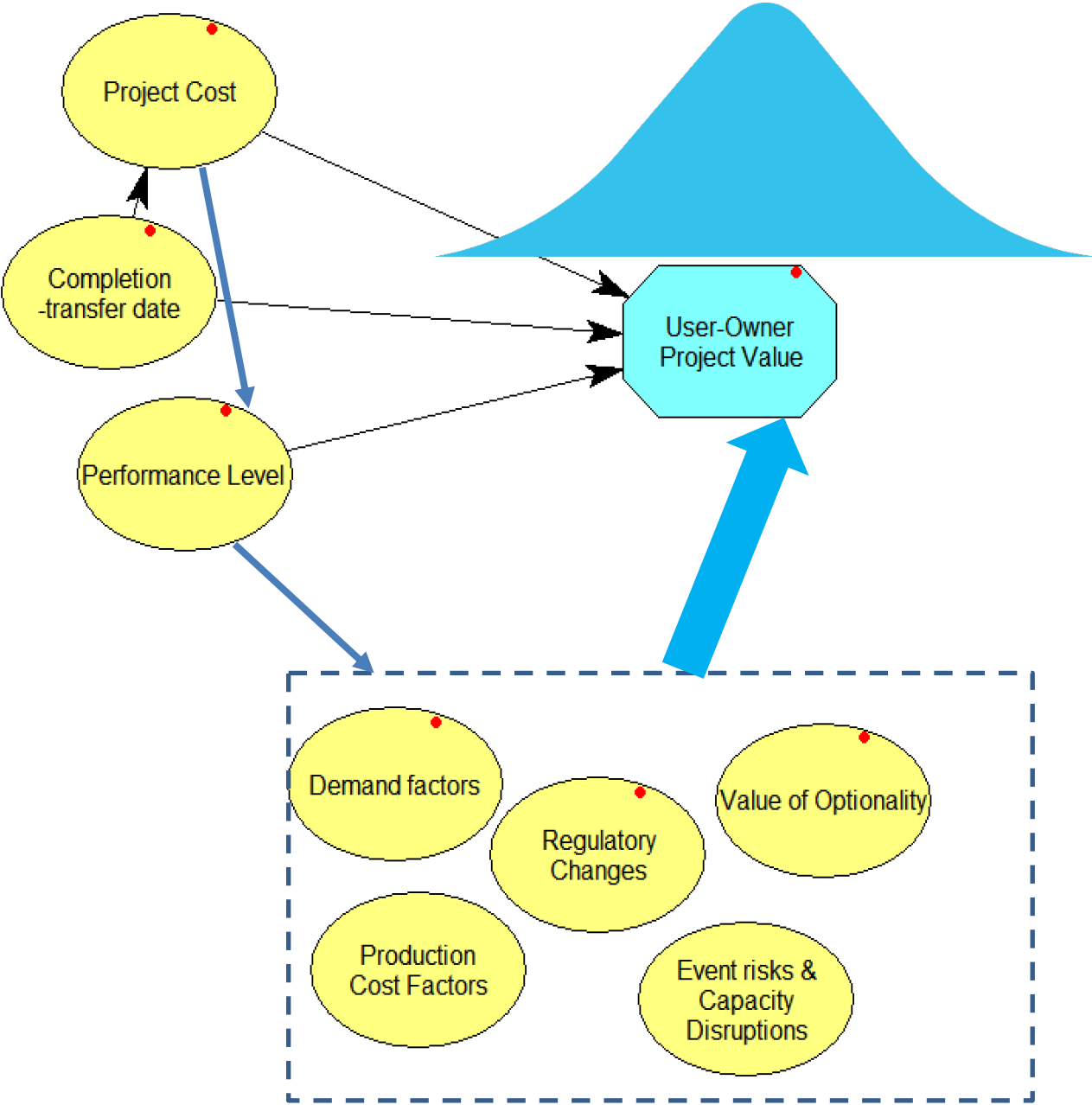


Completed,
Operating,
Transferred
Project

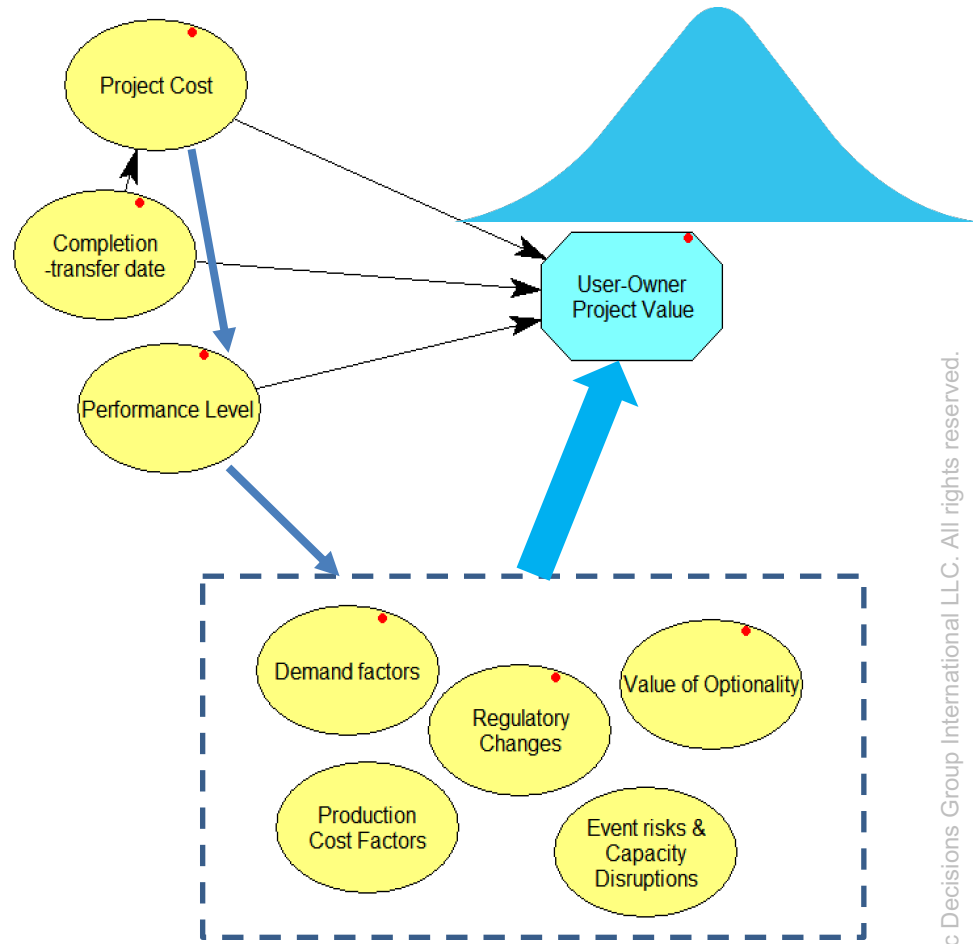
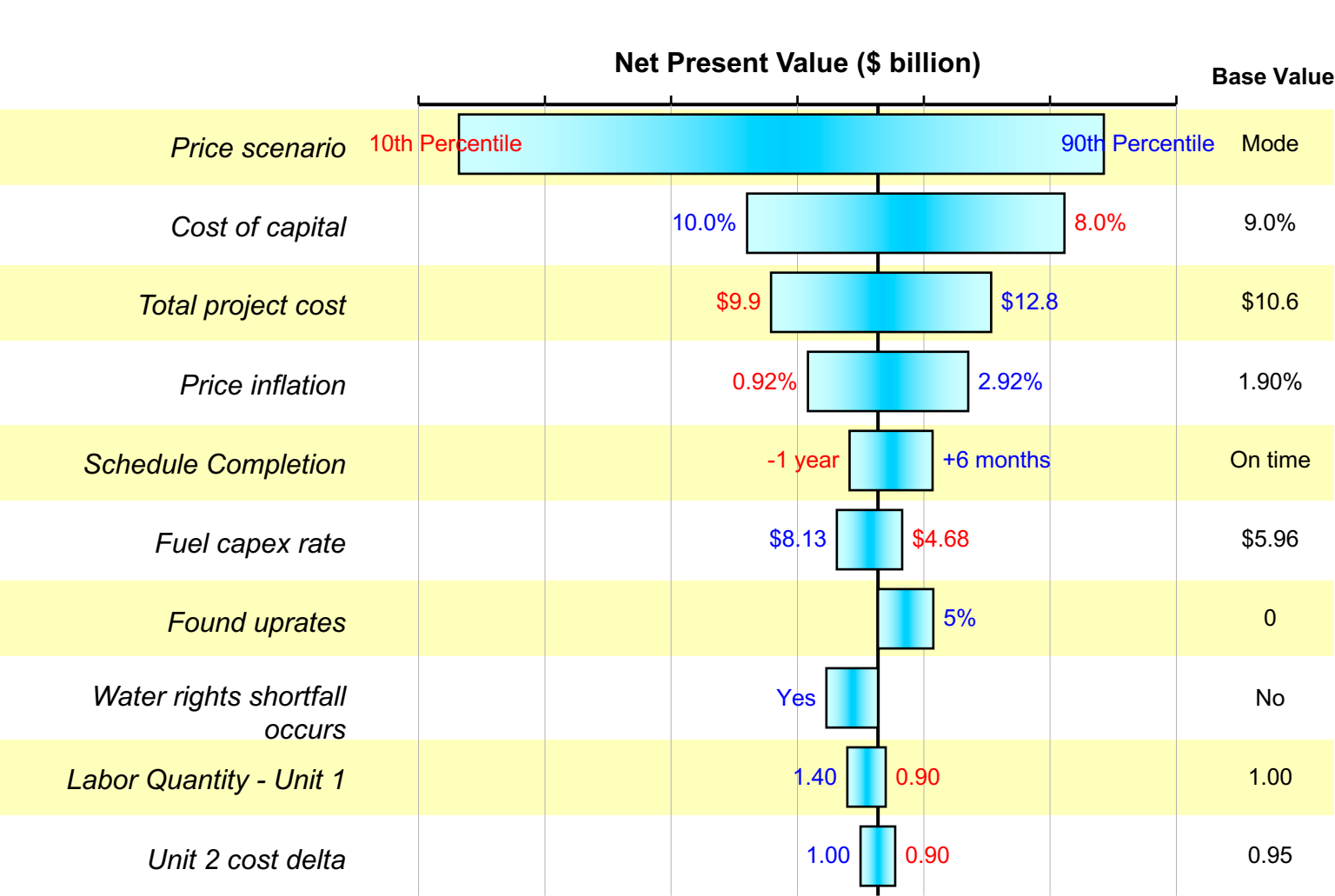
The value-and-risk for a project should be modeled early to provide the line-of-sight to maximum value potential.

- The overall value-and-risk model needs to spawn a project specific cost-schedule-performance value model in the next stage.
- At first the model will be high-level with a lot of uncertainty. As the project becomes more defined, the uncertainty band will shift and shrink.
- Making the model available for all key owner-user parties can help, since most will want to apply their own assumptions and apply their own risk appetite.
- When the project ownership structure, financing, and risk sharing decisions are made, the model can show the specific value-and-risk that accrues to each major party.
- The model will also provide the insight necessary to understand value drivers and the magnitude of risk exposures.
- The model and the modeling team will become essential decision support for the search for the maximum value-and-risk and the many shaping decisions.

The value model for the project initiation decisions has to focus on **total User-Owner Value-and-Risk.**

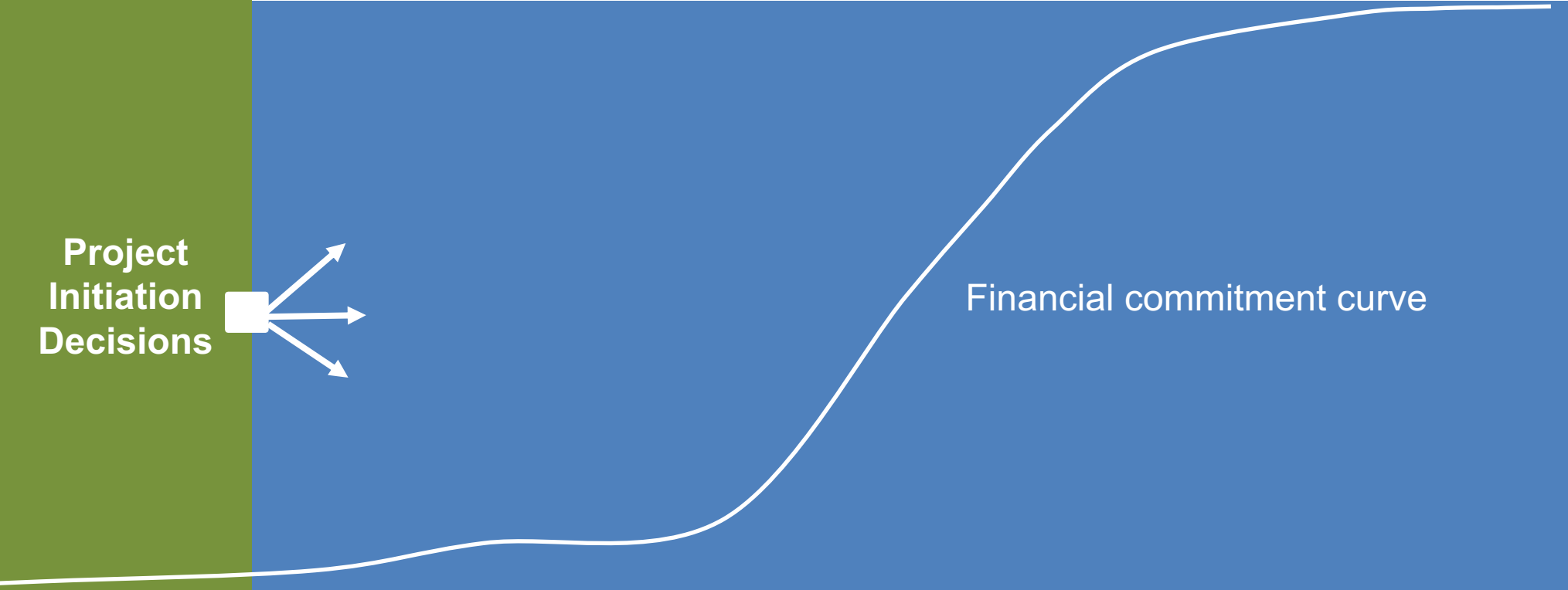


Key uncertainties are outside the specific project team's influence.



© 2020 by Strategic Decisions Group International LLC. All rights reserved.

Relatively little money has been invested to buy an option: proceed to shaping, postpone, or place it back on the shelf of opportunities. Some of the investment has future value (e.g., value proposition, economic analysis, and relationships).

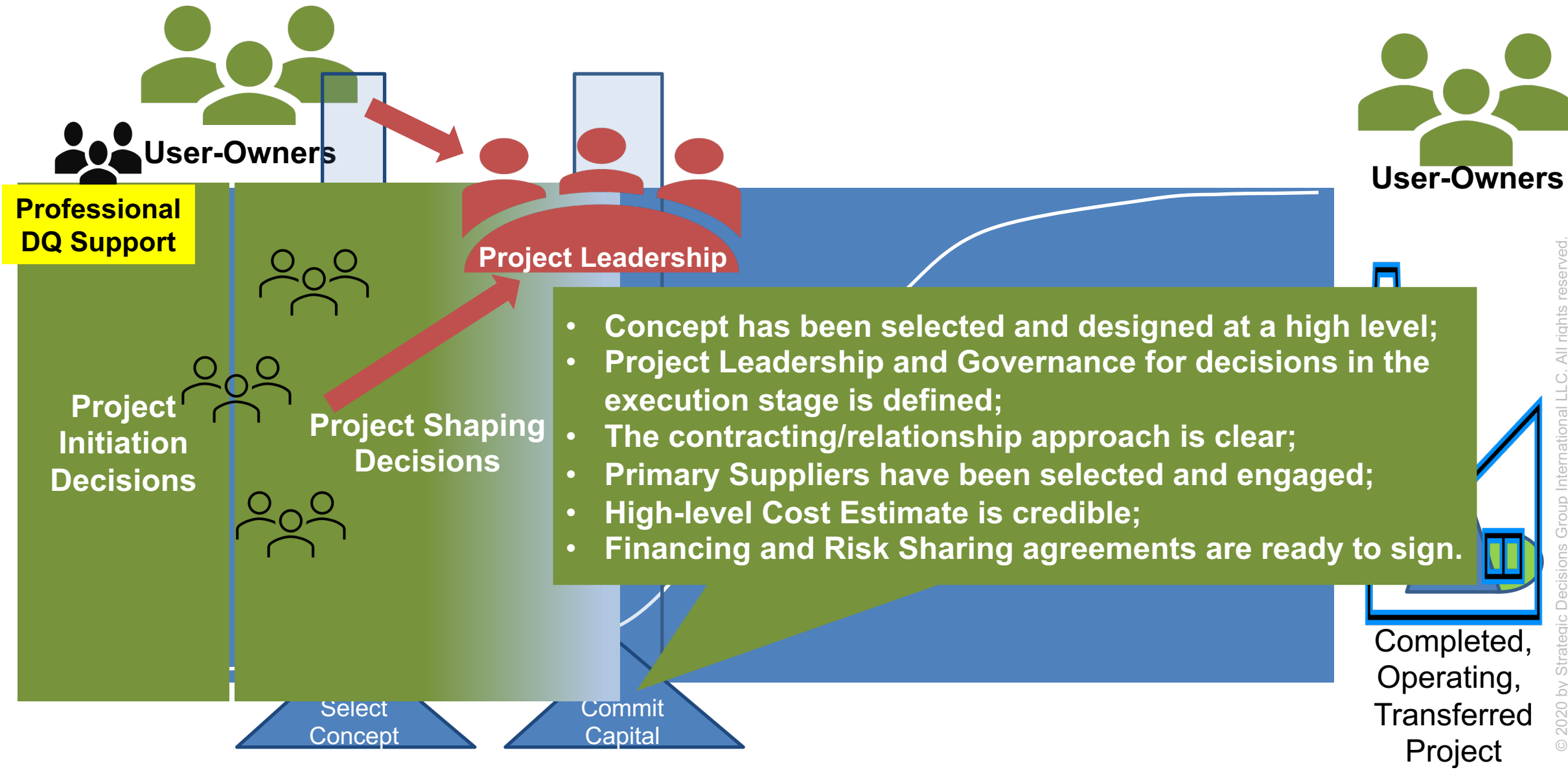


This stage is completed for many opportunities. A few proceed.

Decision Quality (DQ) in Integrated Project Delivery

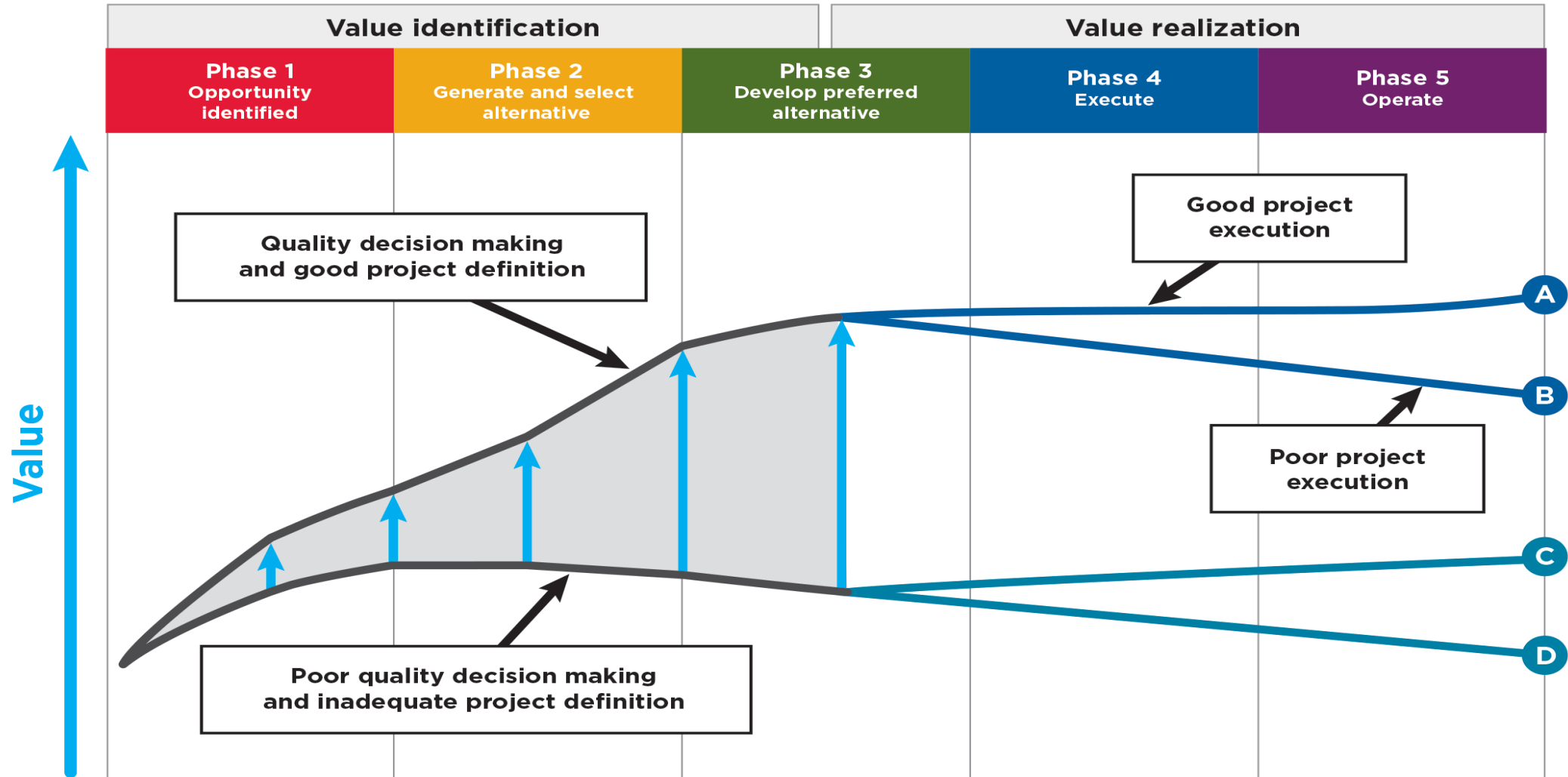
- The Nature of Large Projects
- DQ in Project Initiation Decisions
- DQ in Project Shaping Decisions
- Establishing a Healthy Decision Culture in Large Projects for Executions Decisions

Applying DQ to the project shaping decision generates immense value potential.



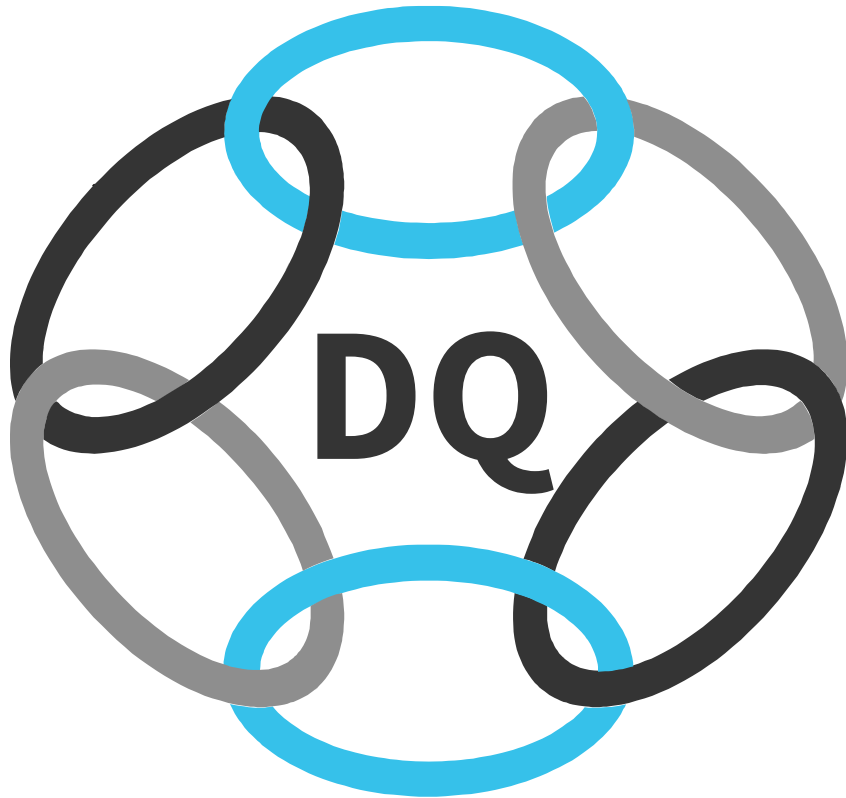
© 2020 by Strategic Decisions Group International LLC. All rights reserved.

Project shaping decisions generate most of the value potential of a project.

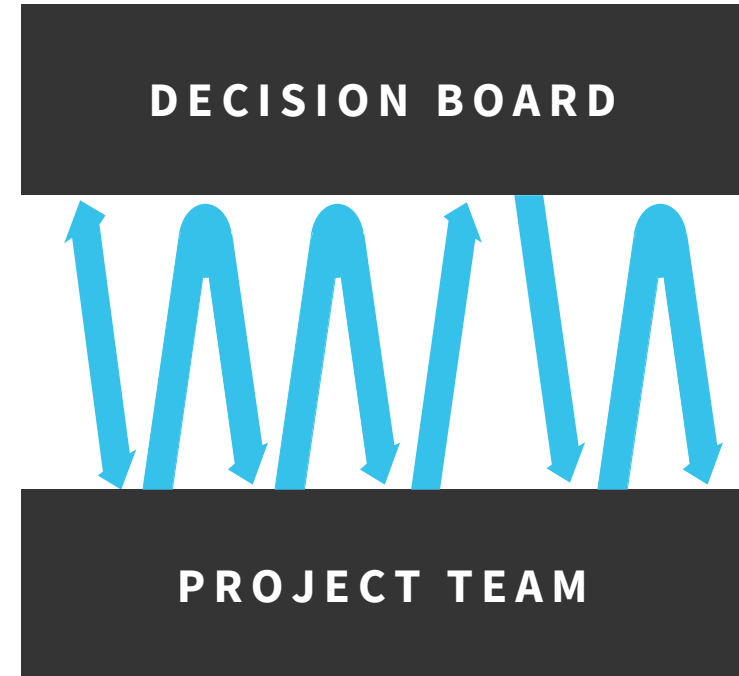


The project shaping decisions are classic DQ decision projects – where each DQ requirement is considered from each participant’s perspective.

**THE GOAL—
DECISION QUALITY**



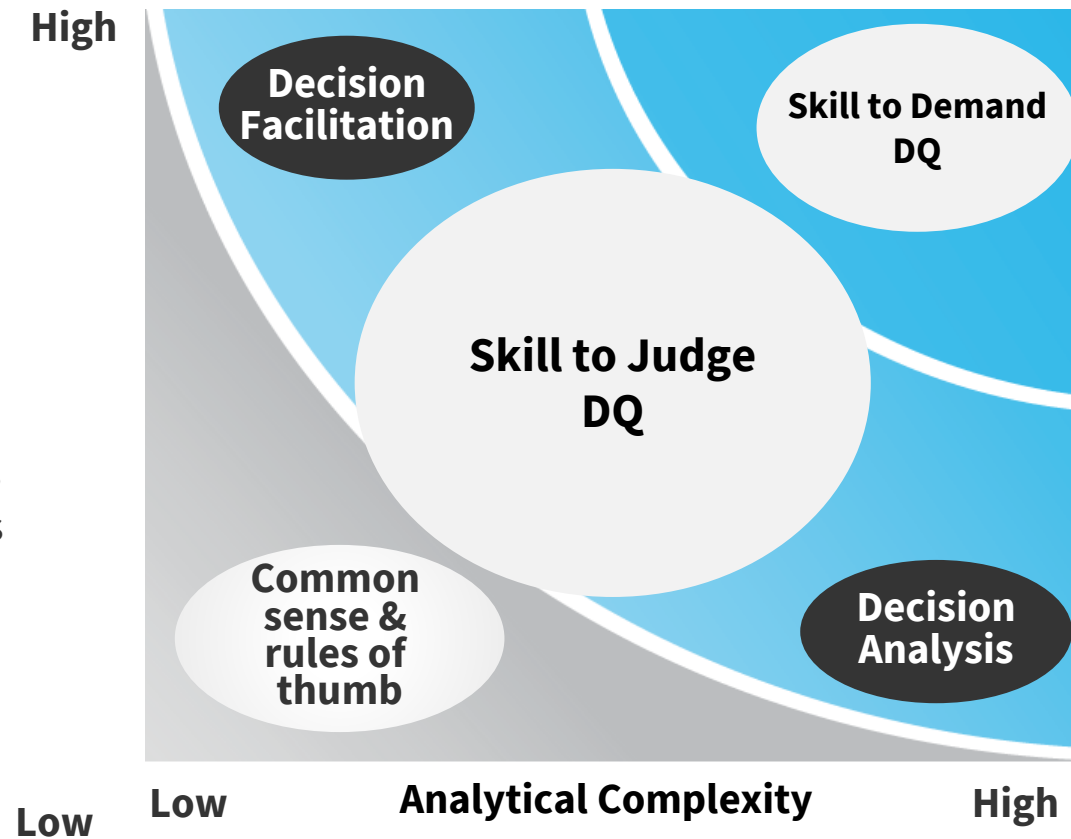
**THE PROCESS—
DIALOGUE DECISION PROCESS**



The project shaping decisions are challenging due to our human nature and analytical complexity.

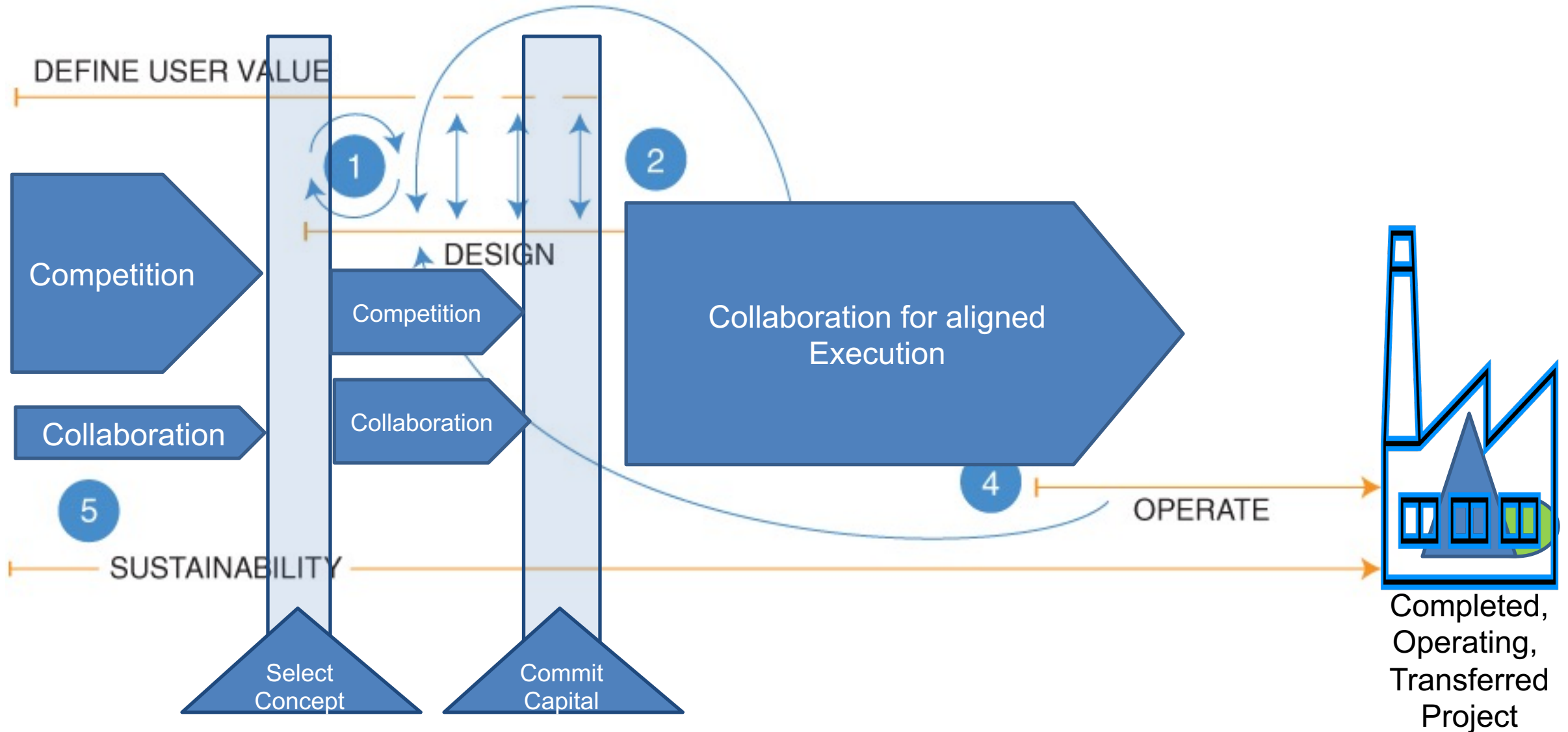
Organizational Complexity

- Many parties in conflict
- Individual and organizational differences in:
 - Values, desires, and motivation
 - Initial convictions
 - Fundamentally different frames
 - Personalities and competencies
 - Degrees of power and resource availability
- Group dynamics—human nature in groups



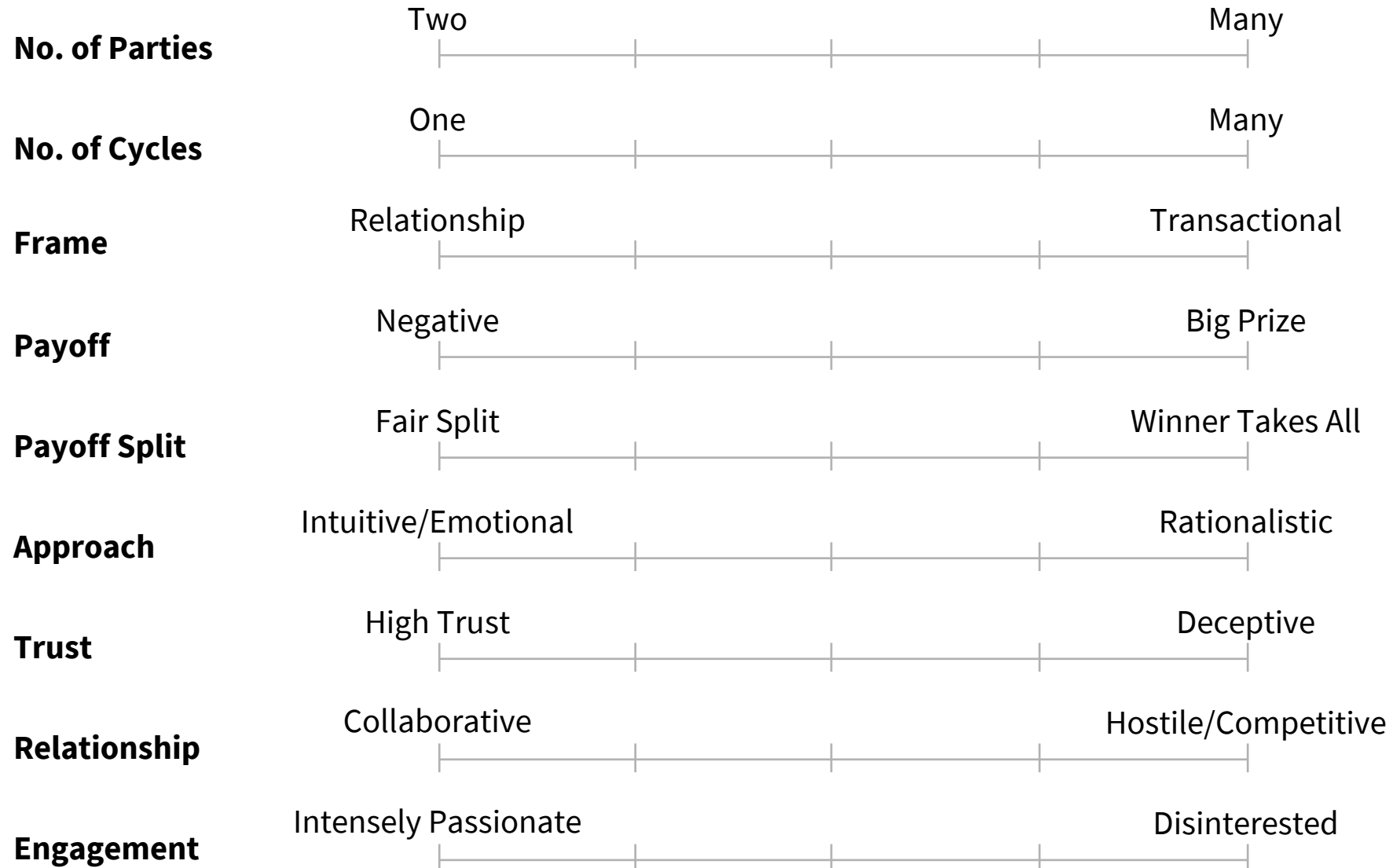
- | | |
|---|---|
| • Uncertainty | • Many alternatives |
| • Dynamics; Options | • Multiple interrelated decision criteria |
| • Many interrelated important variables | • Multiple players in competition and collaboration |

To create the greatest value potential for a project opportunity requires leveraging both competition and collaboration – with true leadership.



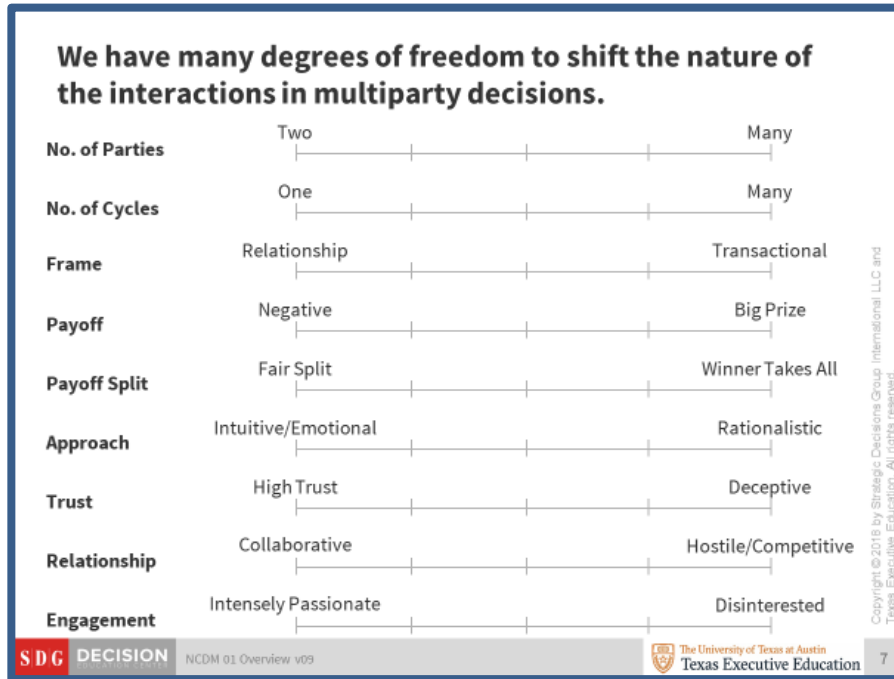
© 2020 by Strategic Decisions Group International LLC. All rights reserved.

We have many degrees of freedom to design the nature of multiparty decisions.



The design of the multi-party relationship creates alignment and friction for value creation and sharing.

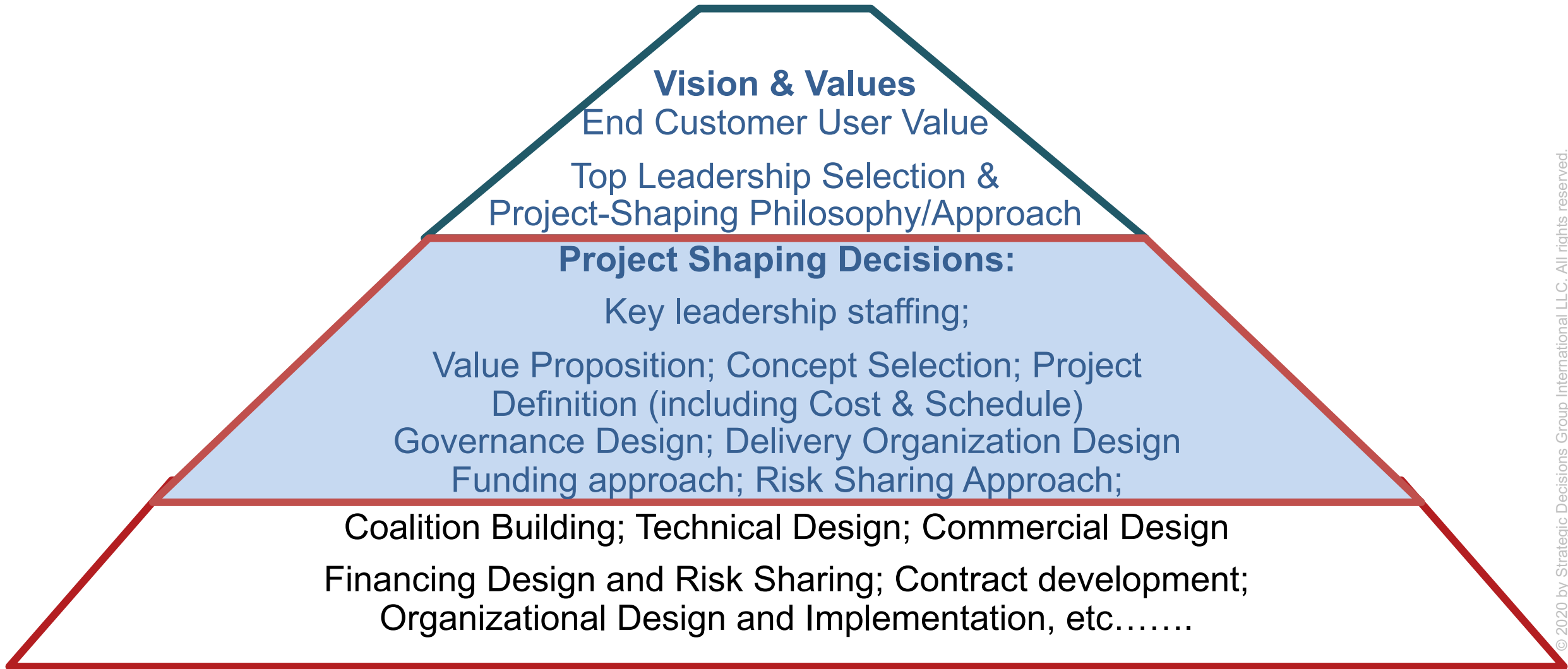
Design of the multi-party endeavor



**Collaborative/
Competitive Activities
Incentives &
Transactions Costs**

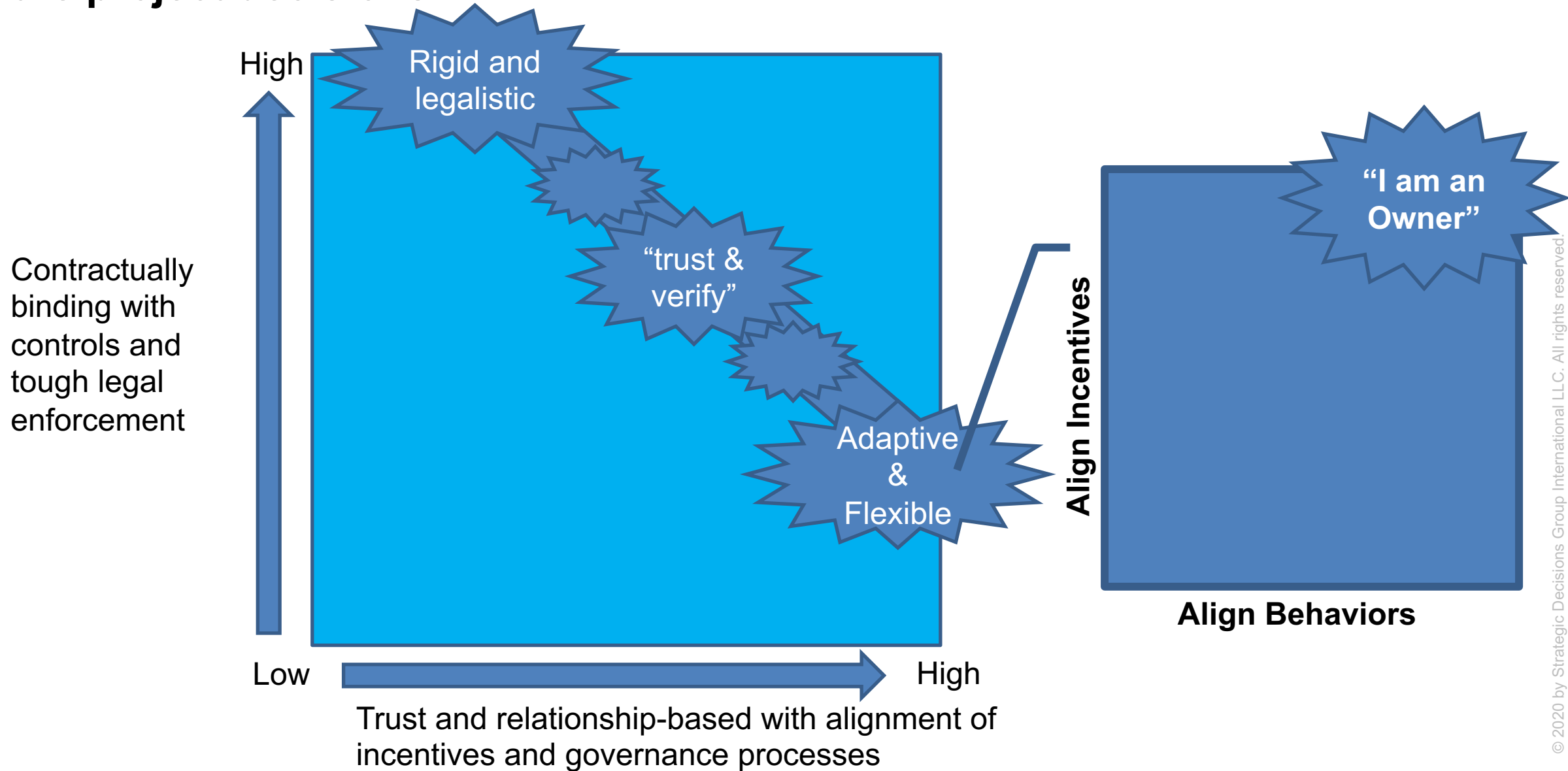
**Total Value &
Share of
Value to each
participant**

A number of “Givens” are resolved during the project initiation stage. The shaping decision agenda is challenging and needs to be tackled with a clear line-of-sight to value-and-risk.



© 2020 by Strategic Decisions Group International LLC. All rights reserved.

The approach to contractual and relational alignment sets the tone for most of the project decisions.



© 2020 by Strategic Decisions Group International LLC. All rights reserved.

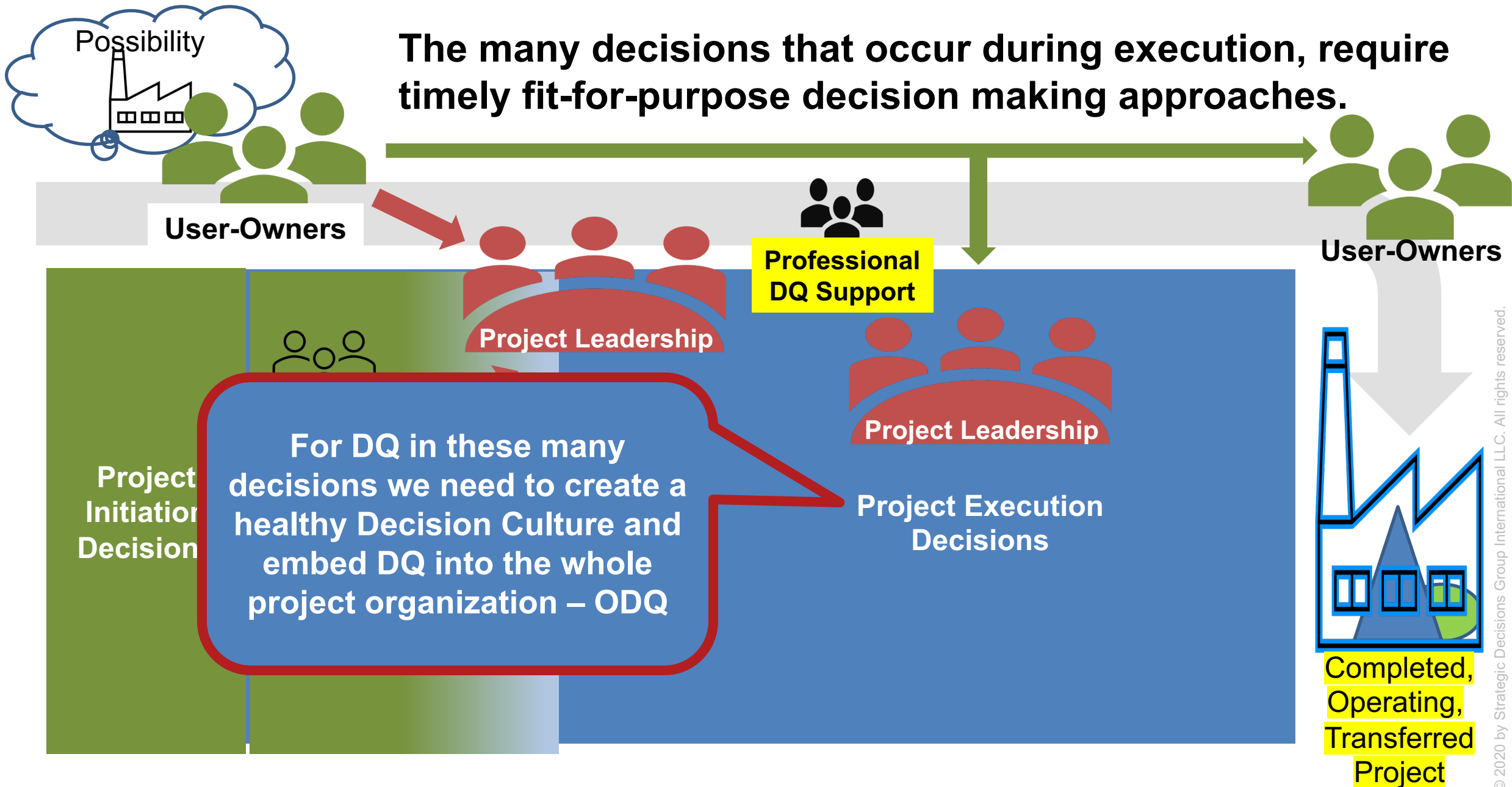
Value-and-risk sharing is inherently a multi-party competitive/collaborative game that has to proceed in multiple rounds.

- Competition is very effective in fostering creativity and generating alternative concepts – which can greatly increase the value potential of the opportunity.
- Until agreement around value-and-risk sharing is reached, it is difficult to align the parties around maximizing the overall value potential of the project.
- There are, of course, many ways to reach agreement around value-and-risk sharing. The involved parties have different interests, beliefs, and preferences. And, they differ in what they can bring to the party – financial resources and risk-bearing as well as the technical abilities to control and influence the risk exposure of the overall project.
- Alignment around value-and-risk sharing is achieved in stages with an increasing number of parties and increasing specificity that finally results in legally enforceable contracts and/or trust relationships.
- The many decisions that need to be made to build the coalition necessary to reach the execution commitment stage need to be guided by a clear line-of-sight to value-and-risk.

Decision Quality (DQ) in Integrated Project Delivery

- The Nature of Large Projects
- DQ in Project Initiation Decisions
- DQ in Project Shaping Decisions
- Establishing a Healthy Decision Culture in Large Projects for Executions Decisions

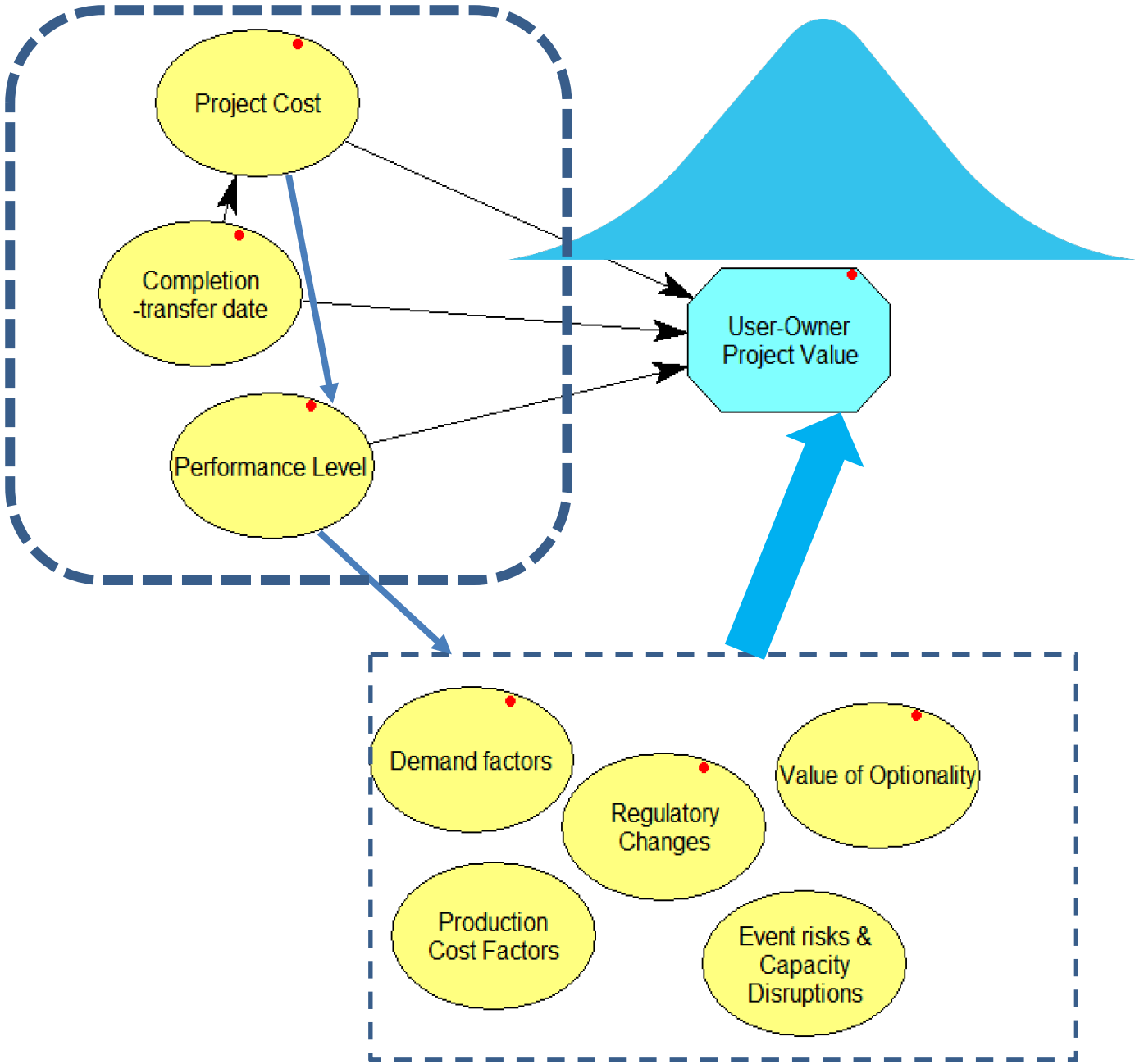
The many decisions that occur during execution, require timely fit-for-purpose decision making approaches.



© 2020 by Strategic Decisions Group International LLC. All rights reserved.

With the project shaping decisions completed – the value focus is now on project execution performance:

Cost/Schedule/Performance

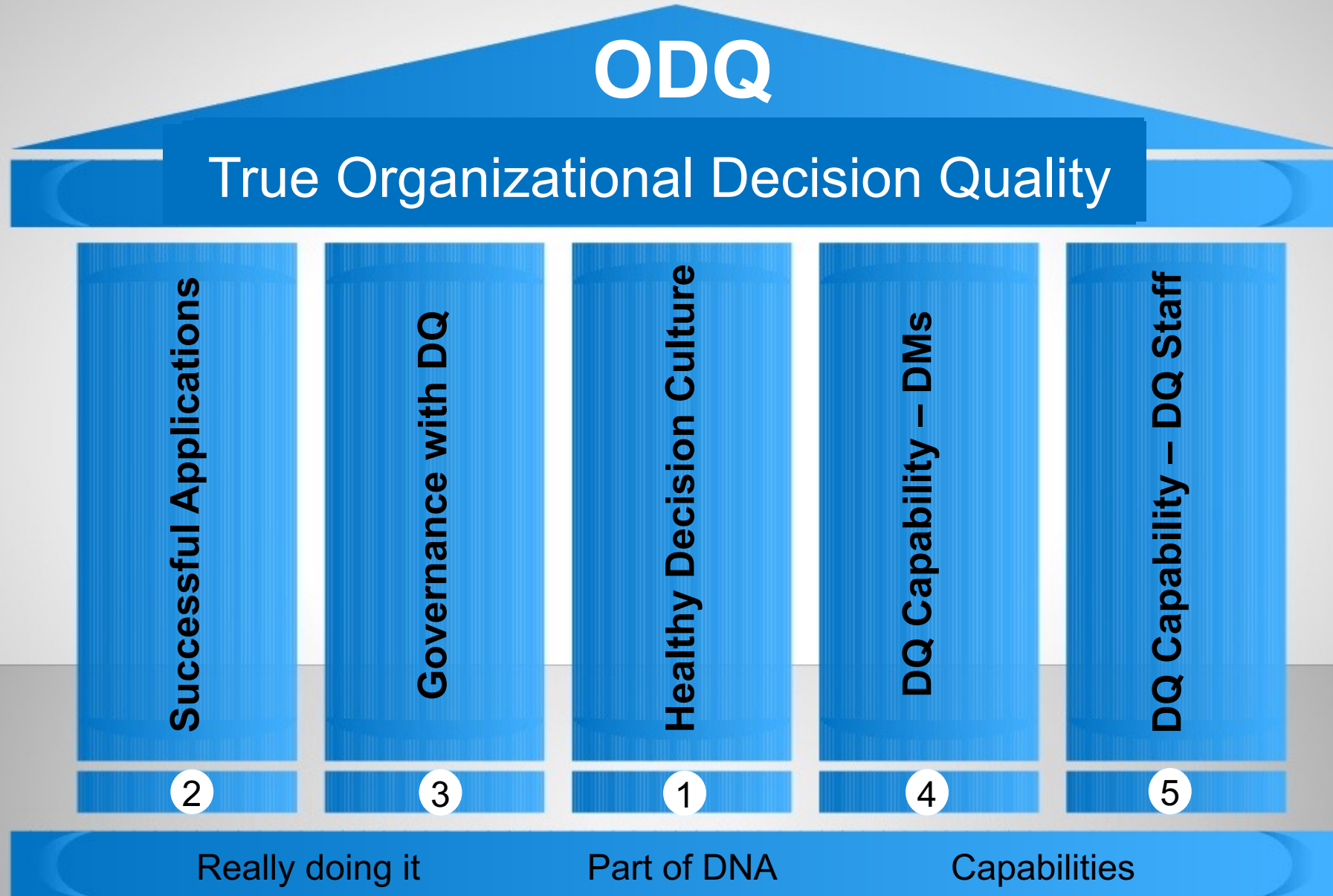


Healthy decision cultures achieve organizational congruence by adopting DQ throughout the project organization.

- Common language and philosophy of decision-making
- Transparency and clear line-of-sight to value
- Shared understanding of value and value metrics
- Shared objective of decision quality
- Dedication to a healthy decision culture that does not tolerate dysfunctional decision behaviors
- **Organizational Congruence:**
 - Alignment of people, processes, culture, and organization
 - Working in harmony that is self-reinforcing
 - Knowing that failure arises from just one broken part!



ODQ is built on Five Pillars of Strength.



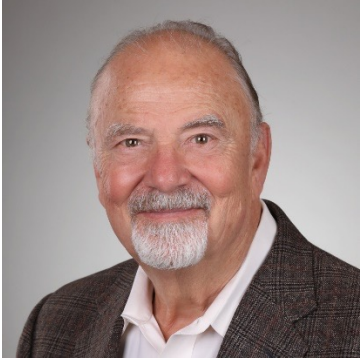
DQ for Maximum VALUE POTENTIAL



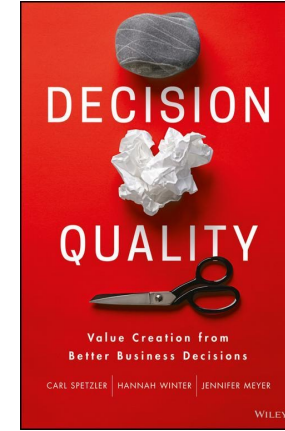
**Professional
DQ Support**



Deliver with Fully Aligned Collaborative EXECUTION



Carl Spetzler Chairman Strategic Decisions Group



Dr. Spetzler, Chairman of Strategic Decisions Group, has been an innovator and leader in the application of Decision Science for decades. He frequently works with top management and boards of directors to improve the quality of decisions. He is a faculty member of the Strategic Decision and Risk Management Certificate Program at University of Texas Executive Education. He serves on the boards of the Illinois Institute of Technology and the Decision Education Foundation. He is passionate about bringing decision skills to youth. In 2004, Dr. Spetzler received the Ramsey Medal, the highest honor awarded by the Decision Analysis Society of INFORMS for lifetime contributions to the field. In 2006, he was inducted into the SRI Alumni Hall of Fame for his contributions to the world of financial services. In 2017 he was the first recipient of the Pioneer Award of the Society of Decision Professionals. He received a PhD and an MBA in economics and business administration and a BS in chemical engineering from the Illinois Institute of Technology. He is the lead author of Decision Quality: Value Creation from Better Business Decisions.