

***Measuring the Value of Decision Analysis
at General Motors
Instruments, Methods, Reflections***

Ernie Smith

Presented at

The Decision Analysis Affinity Group Meeting

January 27-30, 1999

Orlando, Florida



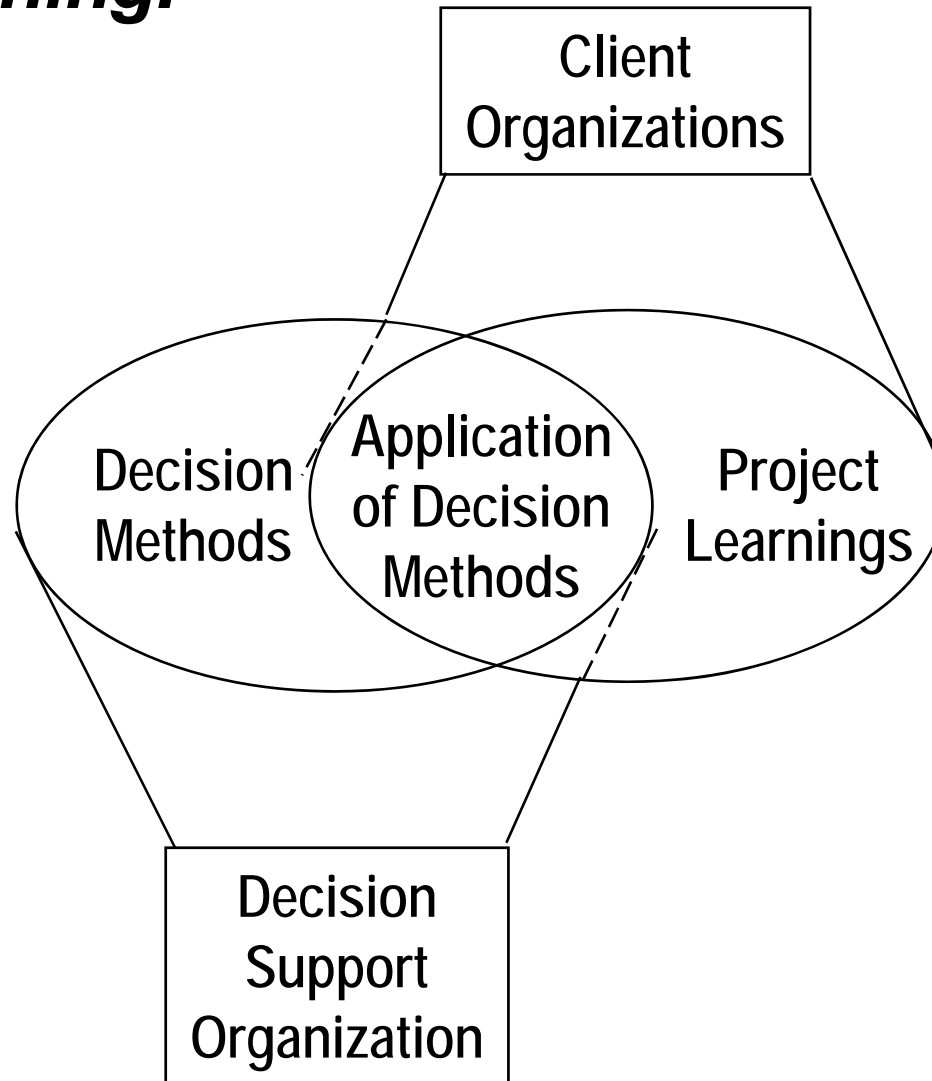
General Motors has measured Decision Analysis Value as the difference between Expected Value of Momentum Strategy and Expected Value of Hybrid Strategy adjusted for DA cost.

DAValue

$E(\text{Hybrid Value}) - E(\text{Momentum Value}) - \text{Cost of DA}$

The major value of decision analysis comes from an organization learning to make better decisions.

Both client organizations and decision support organizations experience continuous improvement through learning.



Client organizations and decision support organizations have both short term and long term learning opportunities.

- Client Organizations
 - ◆ Current project
 - ❖ Make quality decision that is actionable
 - ❖ Learn decision method
 - ◆ Long Term
 - ❖ Keep project learnings alive
 - ❖ Build internal process capability in decision methods
- Decision Support Organization
 - ◆ Current project
 - ❖ Improve decision methods
 - ❖ Improve delivery of decision methods
 - ◆ Long Term
 - ❖ Transfer decision method process capability to clients
 - ❖ Learn and develop new methodologies

User surveys on the application of decision methods can be a powerful tool to share learnings for continuous improvement in decision method delivery and capability across the organizations

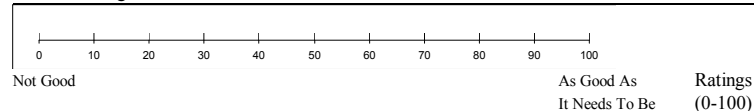
Decision Method User Survey

Project: _____ Date: _____
 Name: _____ Core Team Review Board Others
 (Optional)

Please help us improve the Decision Method process by giving us your feedback below. Feel free to provide your comments in as much detail as possible to describe your experience and learnings with Decision Method on your project. Thank you!

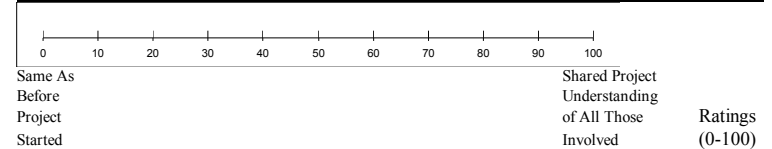
Please return this survey form to: John Palmer
 2H49, Pontiac Powertrain Headquarters
 895 Joslyn Road
 Pontiac, Michigan
 Fax: 8-237-2327 or (810) 857-2327
 Tel: 8-237-1032 or (810) 857-1032

1. Please rate the quality level of the Decision Method for the project for each of the following items using the scale below:



- Appropriate frame: Did the project team solve the right problem? _____
- Were the alternatives creative, doable and broad enough? _____
- How meaningful and reliable was the information used for the analysis? _____
- Were the evaluation criteria clearly defined and utilized? _____
- Did the analysis incorporate logically correct reasoning? _____
- Were the right people involved in the review board? _____
- Were the right people involved in the core team? _____
- What was the review board's level of commitment to action? _____
- Was the calendar time to make the decision satisfactory? _____
- Was the level of resources or effort required to complete the project satisfactory? _____
- Was the level of support from Decision Method personnel sufficient? _____
- Was the quality of support from Decision Method personnel adequate? _____

2. Please rate the level of shared understanding of the decision problem for each of the following participant groups using the scale below:



- What was the level of shared understanding of the Core Team? _____
- What was the level of shared understanding of the Review Board? _____

Comments: _____

3. Which of the Decision Method tools would you use for decisions you make in the future?

- Decision Hierarchy Strategy Table Influence Diagram
 Decision Tree Tornado Chart None

Comments: _____

4. Would you recommend using Decision Method service to others for business decision problems? Why?

- Yes No

Comments: _____

5. What type, size and complexity level projects would you recommend usage of the Decision Method service?

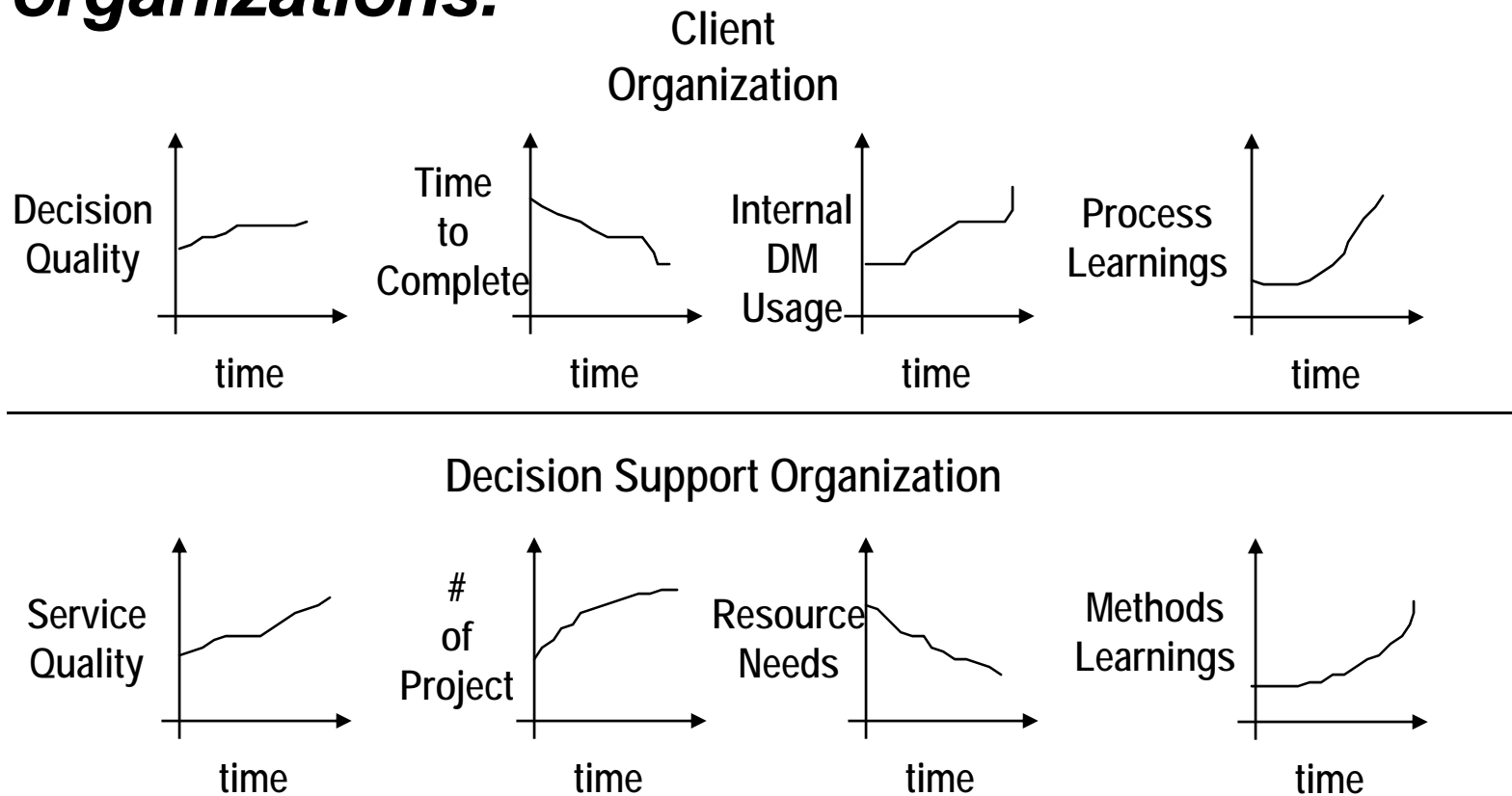
Project Type: _____ Project Size: _____

Complexity Level: _____

Comments: _____

6. Did you participate in any Decision Method education for this project?

Over time, information obtained from the user surveys can provide insights about the internal decision method capabilities of the organizations.



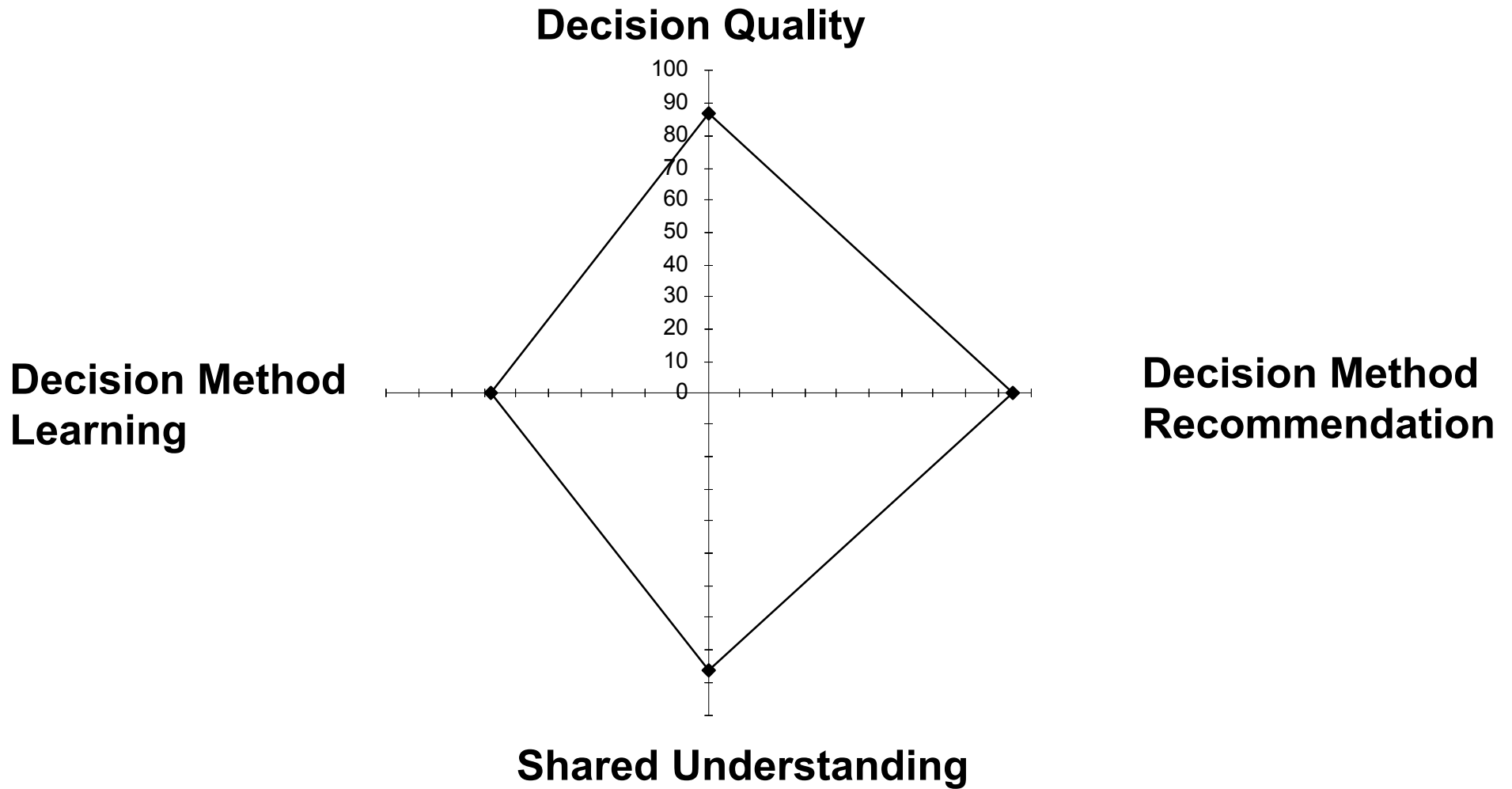
User surveys also provide insight for immediate improvement in many areas.

- Client Organization
 - ◆ Project resource
 - ❖ choose the right decision makers, review board and core team
 - ❖ allocate enough time and effort
 - ◆ Decision method
 - ❖ process learning
 - ❖ tool usage capability
- Decision Support Organization
 - ◆ Project resource
 - ❖ process delivery strengths and weaknesses
 - ❖ process strengths and weaknesses
 - ◆ Decision method
 - ❖ effectiveness of decision method process
 - ❖ effectiveness of decision method education

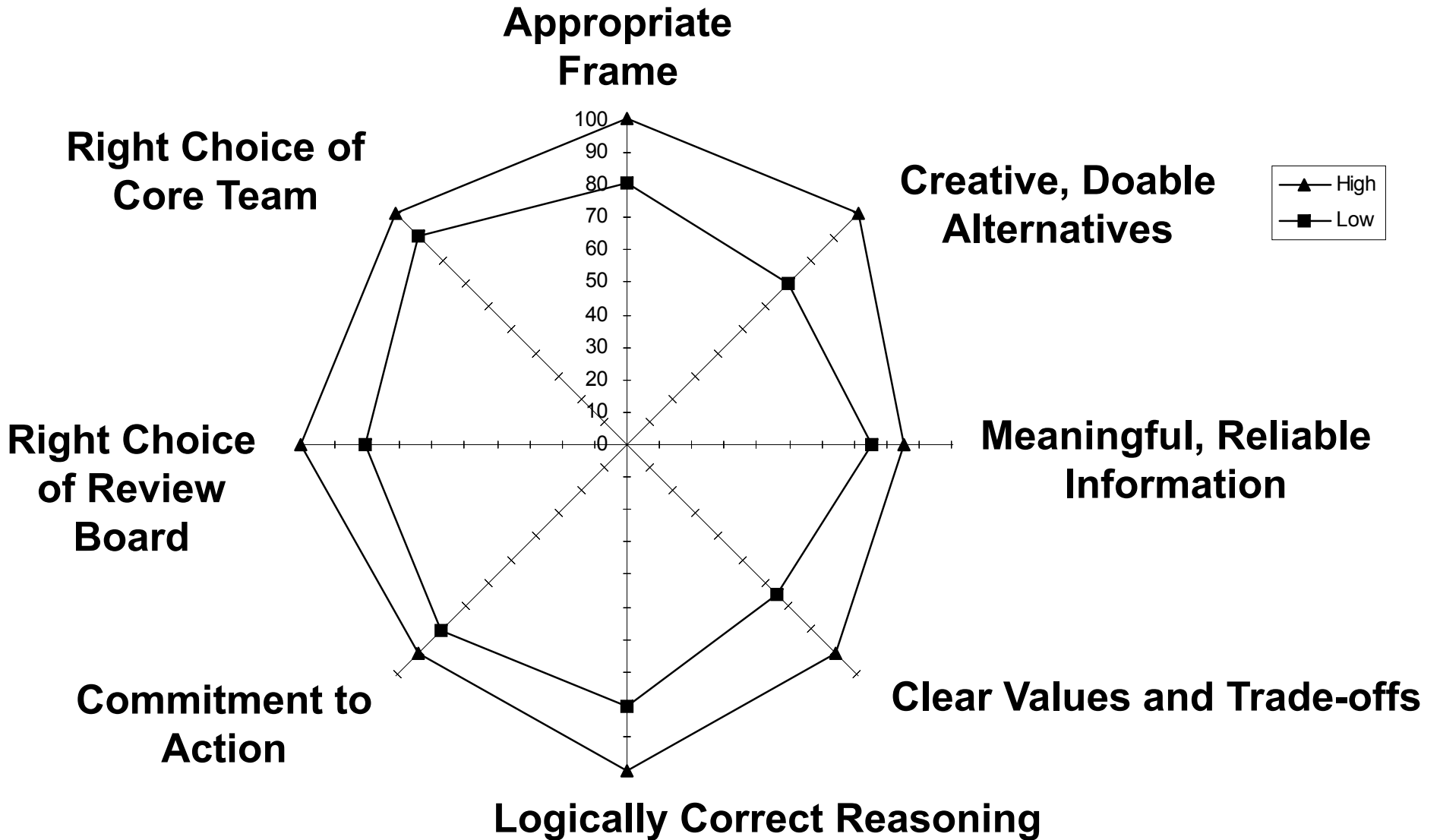
These are some charts used to learn from surveys of core team and review board participants at General Motors.

- Project Quality Chart -
a summary of the following four charts
- Decision Quality Chart -
traditional decision quality questions
- Decision Method Recommendation Chart -
client satisfaction indicators
- Shared Understanding Chart -
core team and review board alignment
- Decision Method Learning -
knowledge of tools

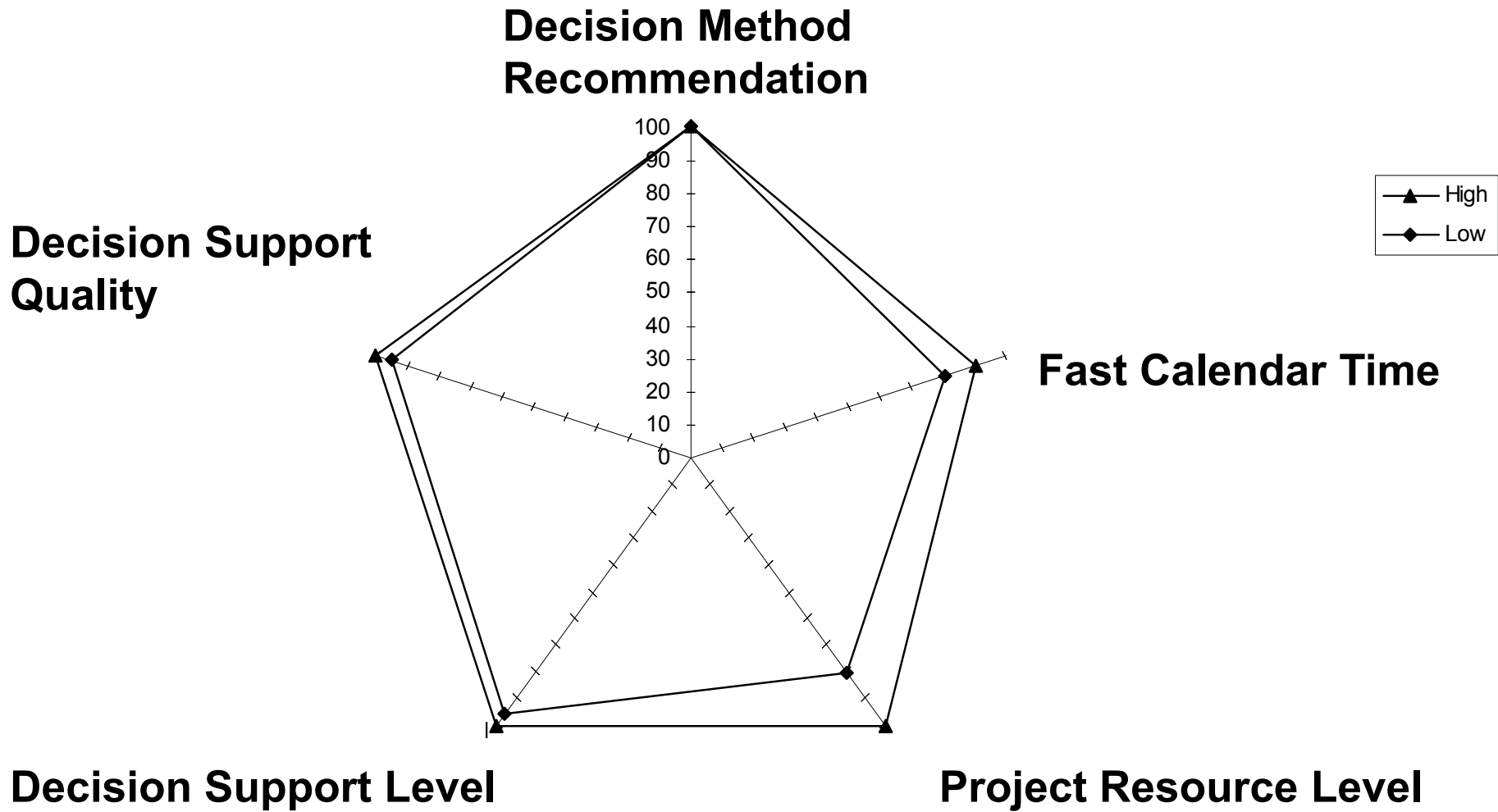
Project Quality Chart



Decision Quality Chart

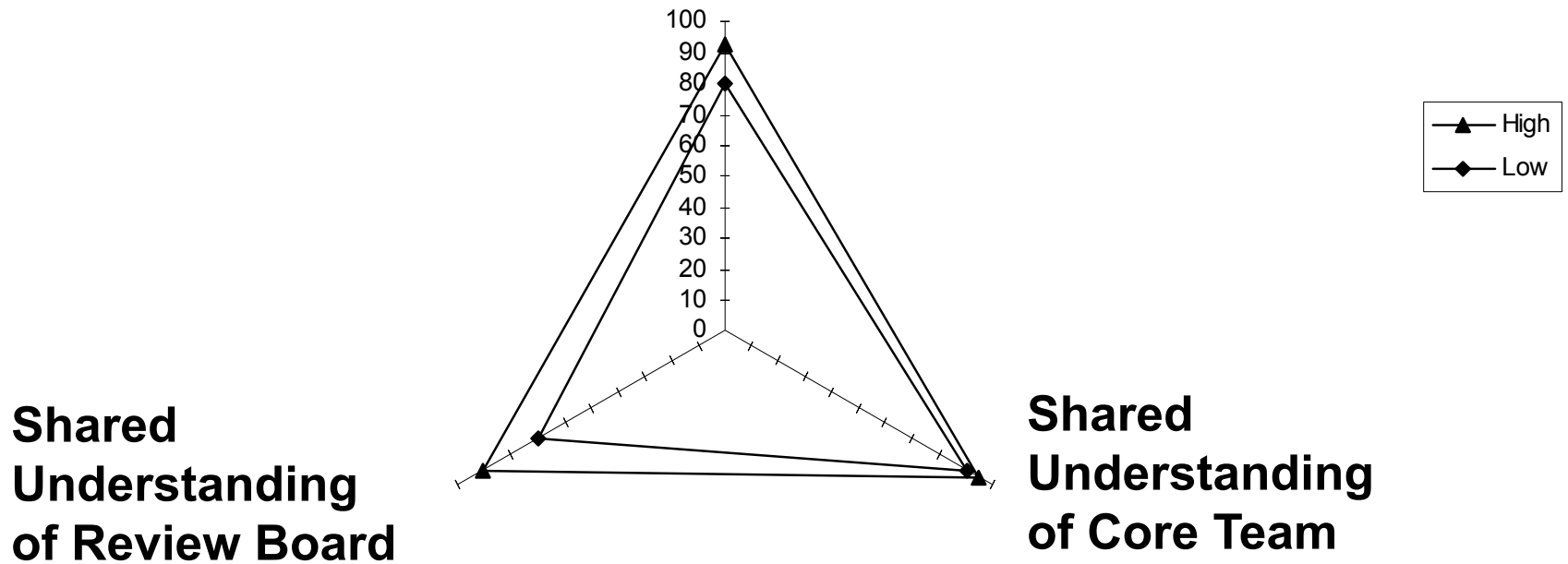


Decision Method Recommendation Chart

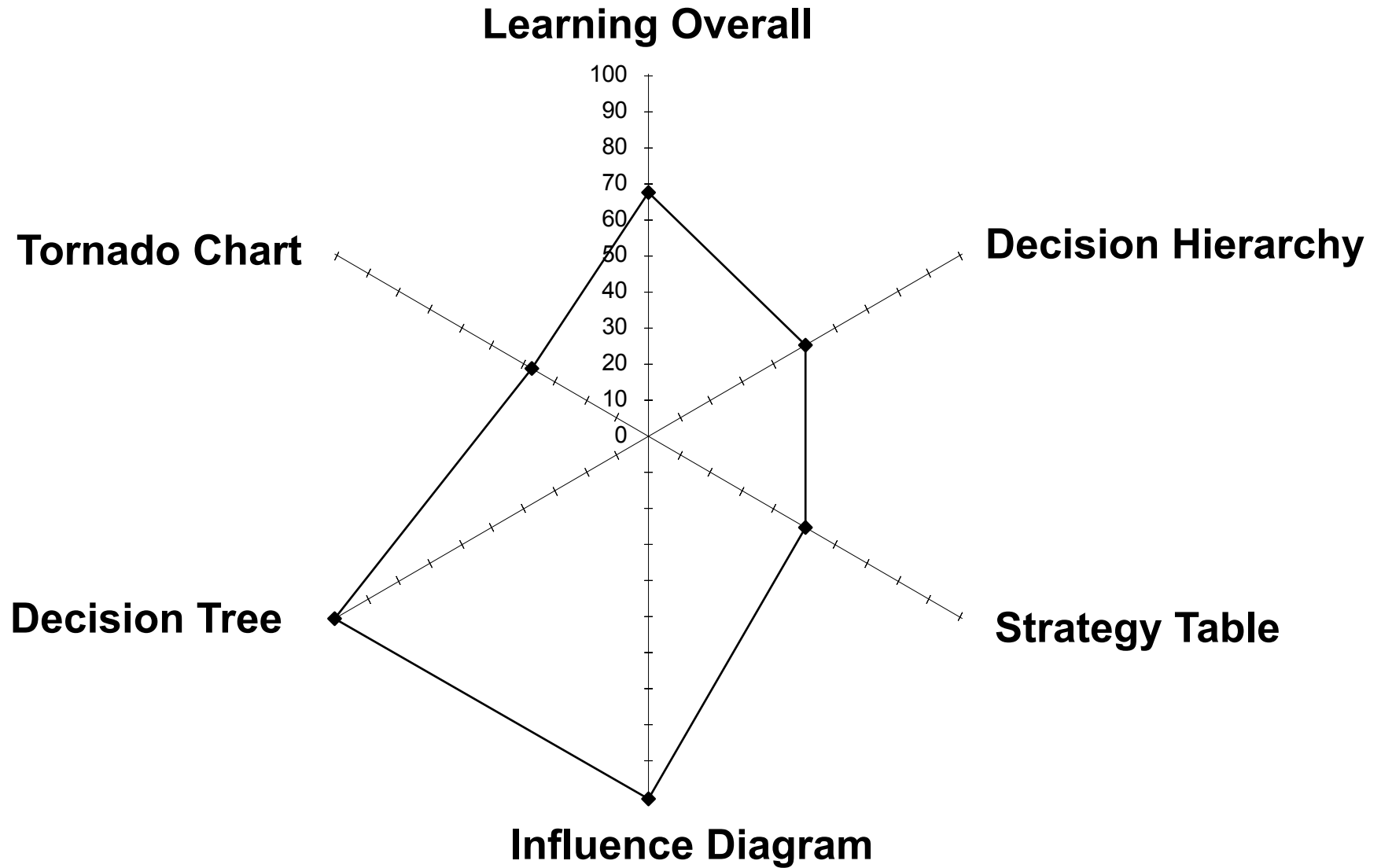


Shared Understanding Chart

Overall Understanding



Decision Method Learning



What did we learn from the post project review with the core team?

- Project Learnings
 - ◆ High decision quality was achieved on the decision problem
 - ◆ The right people were involved in the review board and core team
 - ◆ The level of resources and effort provided was satisfactory
- Decision Method Process Learnings
 - ◆ Team felt comfortable using decision method tools in future projects
 - ◆ Positive acceptance of decision methods
 - ◆ Majority of core team attended education class
- Decision Support Ratings
 - ◆ Fast application of the decision method process
 - ◆ High process delivery service performance
- Areas for Process Improvement
 - ◆ Better use of evaluation criteria
 - ◆ Help review board better understand decision methods

The value of Decision Analysis comes from -

Decision Quality

Clients who value and use decision analysis

Core teams and review boards able to develop shared understandings

Core teams able to apply decision analysis on their own