

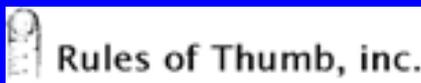


How do we create DSS to
connect to decision makers?

or

What do DSS need to do to
communicate effectively
to decision makers?

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DSS support for managers

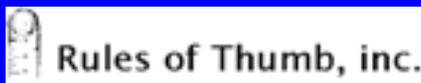
- Useful properties of a DSS for a manager:
 - ✓ Rational
 - ✓ Transparent
 - ✓ Repeatable
 - ✓ Broad applicability
- The big picture





Rational solutions

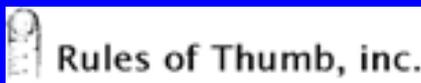
- If we can reason about the problem, we can model it
- Why is this important?
 - ✓ Typical natural resource problems are
 - Large (high dimensional)
 - Abstract (e.g., integrity, resilience, etc.)
 - Complex (e.g., nonlinear, interdependencies)





Transparent solutions

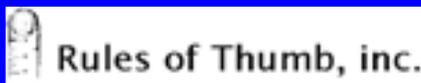
- A DSS should be able to explain its answers in relatively intuitive terms
- A manager should be able to
 - ✓ Understand the solution
 - ✓ Explain it to superiors and stakeholders





Repeatable solutions

- Basic property
 - ✓ Same data – same result
- Repeatable over time
 - ✓ New data – consistent results
 - ✓ E.g., adaptive management
 - ✓ A key to performance metrics
- Prerequisite
 - ✓ The DSS should be fully self-documenting





Broad applicability

- DSS development has a long history of “one offs”
 - ✓ Very inefficient
 - ✓ Very expensive
 - ✓ Each new DSS has a learning curve
- DSS frameworks
 - ✓ An integrated set of tools
 - ✓ A system for building DSS
 - ✓ Support for a broad array of problems and scales





The big picture – three questions

➤ Assessment

- ✓ What is the state of the system?
- ✓ This is about interpretation and synthesis
- ✓ Foundational for decision support

➤ Strategic planning

- ✓ Where are the high priority places on the landscape?
- ✓ Logistical considerations of managers matter.

➤ Tactical planning

- ✓ What are the best management alternatives in high priority places.
- ✓ Again, logistics matter.

