The situation

System Dynamics is frequently used to cut through the complexity of real world phenomena and understand what is important.

"Now this chart represents five years of zigging and zagging and I don't know what the heck it all means."

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A complication
System Dynamics is complex, and system
dynamicists frequently
are challenged to get their
messages across

"Spaghetti" diagrams
"Black Box" modeling
poorly-labeled model output
Limited visuals, if any
Dense documents

How can we be more effective at communicating the messages we want to convey?

The first role of a consultant is to
DIAGNOSE the client's situation/problem

- Identify the nature of the situation
- Determine the appropriate type of system dynamics
- Description of meeting
- Open minds, clash
- Appropriate research
- Ability to articulate situation

Diagnose

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Next a consultant brings to bear EXPERTISE which provides a solution to problems and needs

- Make sure your model is right
- Accurate representation of the dynamic, situation, business or market
- Communicate/check the model against your client's perception

Finally a consultant's role is to INFLUENCE by gaining agreement on action steps

- Agree to task order
- Gain agreement on action items
- Gain agreement with client on most appropriate next steps
- Ability to transition back to the other roles

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People working in the field of system dynamics would benefit from strengthening communication/consulting skills.

System dynamics tools & models concentrate on expertise but have started to move more towards influencing and diagnosing.

- Translating Information Into Models (hexagons)
- Systems Thinking (newsletters, paradigms)
- Introductory SD materials (books, tapes, lectures, CD-ROM, etc.)
- Industry-specific books, papers & conferences

Pugh-Roberts works is continually trying to communicate better in many industry sectors...

- Telecommunications
- Financial Services
- Software Development
- Shipbuilding
- Civil Construction
- Aerospace Development
- Healthcare
- Electric Utilities
- Entertainment and Sports

A case study in the credit card industry follows.

1. Diagnosis
2. Modeling Expertise
The problem: A steady decline in market share

... in spite of repeated attempts to reverse the loss. This was exacerbated by conflicting actions in different parts of the organization and disagreement about what to do.

The credit card industry simulation model became a platform for discussion, sharing of ideas... and sometimes... conflict.
Competitors' performance and decisions were explicitly captured so they agreed it was the most comprehensive model they had of their industry.

A systematic search of leverage points revealed the answer:

A testbed which spanned the functional organizations forced the company to put people from marketing, sales, product development, IT and business strategy in the same room... to look at the bigger picture.

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The result: co-branding strategy reversed client share loss...while doubling issuing bank profitability

Although communication was not always easy, the actions recommended were followed and business performance turned around.

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Other model-building lessons from our experience

Build with Formative Assurance
- Long-term benefits can be tied directly to model participants
- Explain causal relationships
- Use examples to explain dynamic elements (delays, non-linear relationships, feedback, behavior over time)

Tie to the Real World of the Participants
- Focus on observable metrics and actionable policy levers
- Use plots judiciously, and relate behavior of key metrics back to underlying cause/effect structure

Empower Participants
- Facilitate Participants as they build up models of their structure
- Draw out questions that lead to model insights
- Define appropriate boundary to hide unnecessary technical detail that obscures understanding

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Summary

It is important to build influence and diagnosis skills, not just expert modeling skills, to work with others who have some of these strengths.

References


And a special thank you to

Ken Cooper
Jane Hemingway
Andreas Kaempf

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