

Community Dynamics

Tools to understand the value drivers of a
community

transforming results
PWC CONSULTING



A business of *PRICEWATERHOUSECOOPERS* 

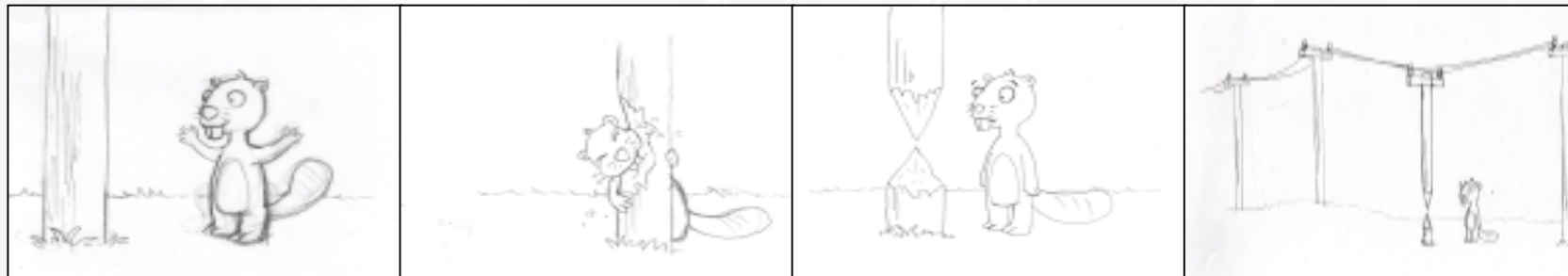
Executive Summary

- To make reasonable strategic decisions within a company you need to understand the value drivers
- PwC Consulting uses a systems approach to identify the value drivers of a business
- Understanding the value drivers allows you to understand the business system
- Within a business community the complicating factor is the interaction between businesses in the community
- Understanding the community drivers is necessary to manage the community and develop a sustainable structure
- To understand the community dynamics you need to understand the feedback relationships inherent within the community
- To deepen our understanding of the dynamics of a community a quantified model can be developed
- A computer simulation of the community dynamics is a powerful tool to explain the benefits of the community to the participants
- A computer simulation of the community dynamics is also a powerful learning tool and change agent
- As a summary, the stages of development of a Community Dynamics model are shown

To make reasonable strategic decisions within a company you need to understand the value drivers

To identify these value drivers you need to take a holistic view of the business and work with management to identify the key value drivers and understand the interrelationships between them. PwC Consulting have tools available to understand the drivers of value within a company.

There are risks associated with not taking this holistic view of the business... you can end up making incorrect strategic decisions:



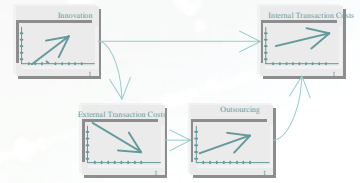
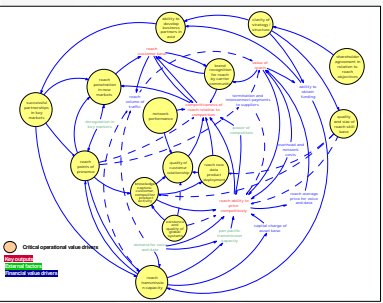
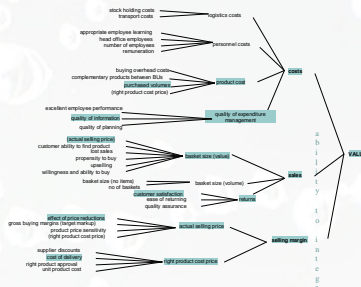
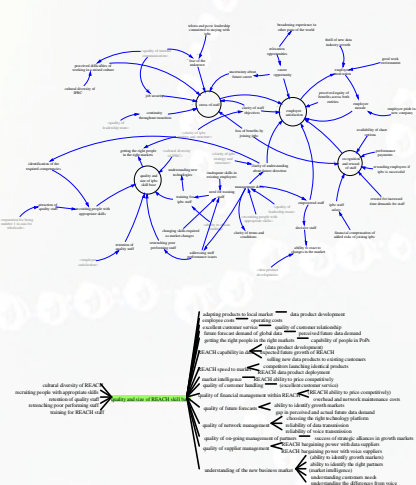
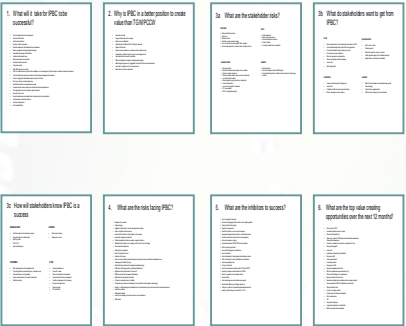
Source: PwC Consulting

PwC Consulting uses a systems approach to identifying the value drivers of a business

The PwC Consulting approach to understanding the value drivers of a business is to run a series of workshops with the management of a business and collate the combined knowledge into a value driver model. The process that is typically used is as follows:



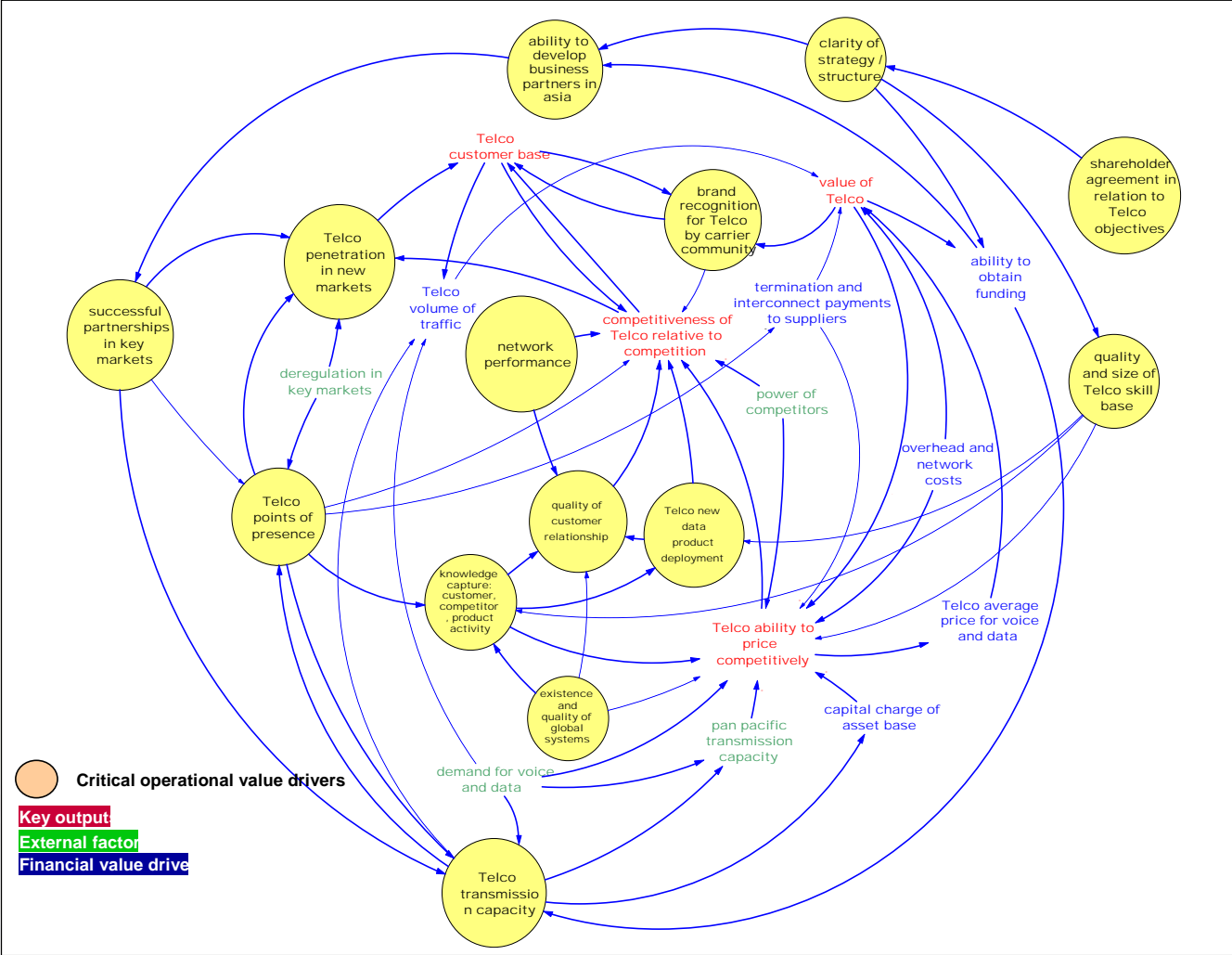
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Understanding the value drivers allows you to understand the business system

Most organisations today have grown rapidly in a short space of time. This means that there is a reduced possibility of the majority of the management team each understanding the entire business.

In developing the value driver model we now have an understanding of the dynamics of the business from a holistic level.



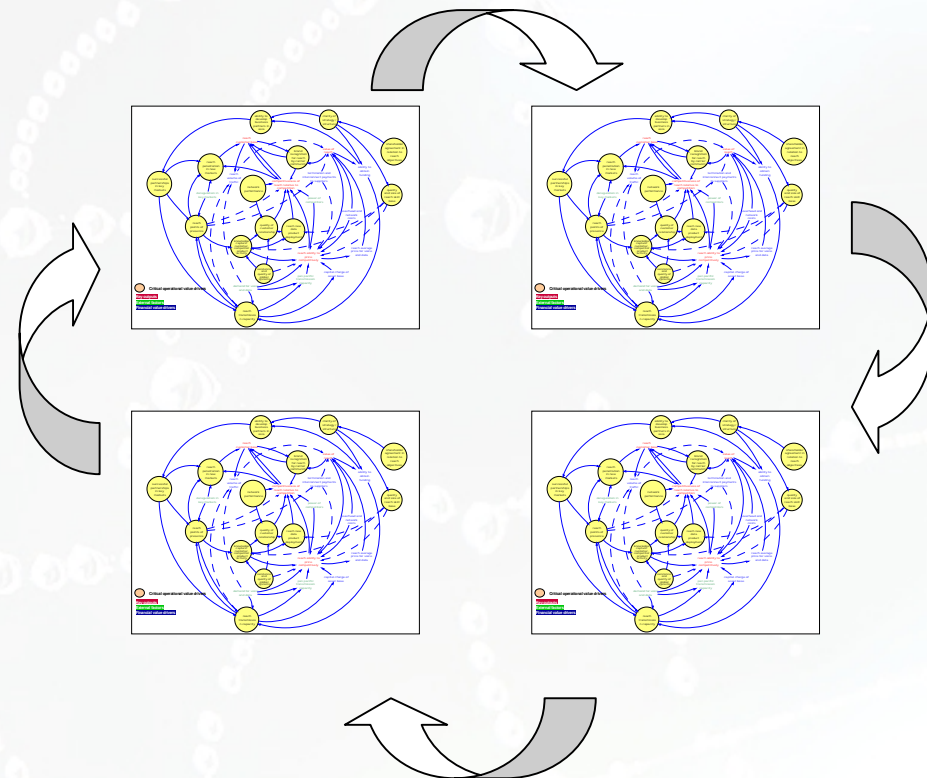
Within a business community the complicating factor is the interaction between businesses in the community

In a community you not only need to understand the drivers of the individual businesses who are acting as participants in the community. You also need to know the dynamics between the members of the community.

These will be the community drivers. It will be the management of these community drivers that mean the difference between a successful transformation to the community model and a failure.

An understanding of the community drivers can be gained following the same process as that to develop the business value drivers.

From this you will gain an understanding of the community dynamics.



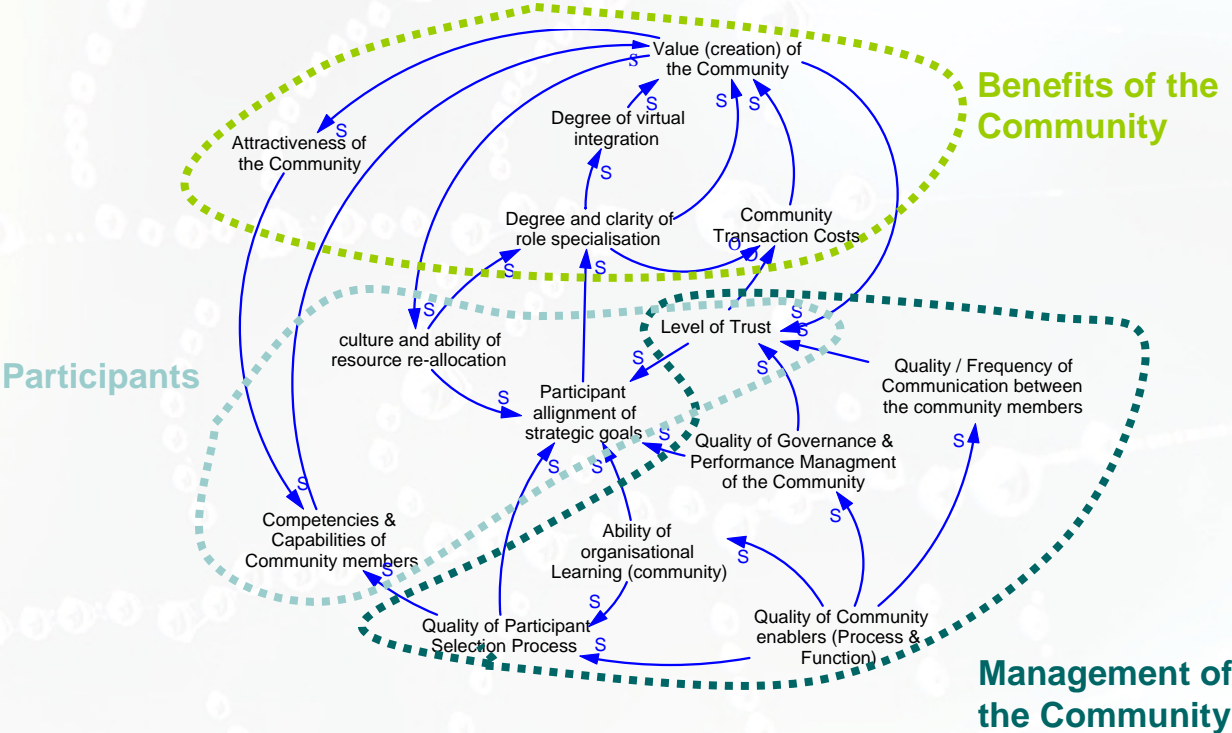
Understanding the community drivers is necessary to manage the community and develop a sustainable structure

Community drivers include:

- Trust
- Communication
- Reward sharing
- Transparency
- Role specialisation

For the community to be successful these drivers need to be managed. The complexity caused by the interrelationships of these drivers makes this more difficult.

An example of a community driver model ¹⁾:



¹⁾ Source: Jarosch, Daniel (2002), Modelling Community Driver, currently unfinished paper

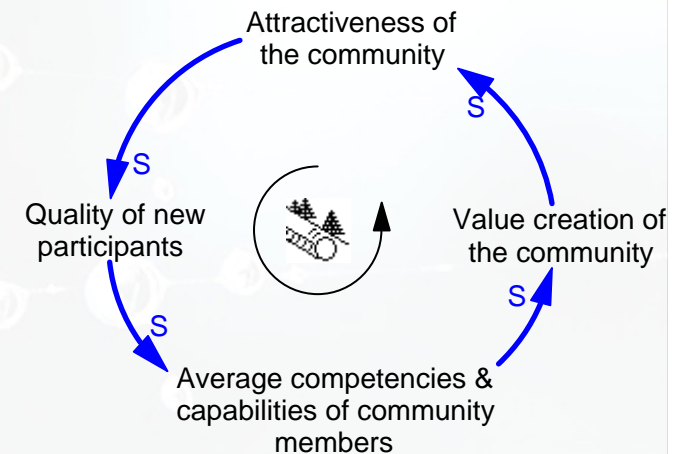
To understand the community dynamics you need to understand the feedback relationships inherent within the community

An example of a feedback relationships within a community is the reinforcing or snow ball effect within the community in relation to the value creation of the community. This means that the more value creation, the more attractive the community will be, the more attractive the community to high quality participants will want to join which will increase the average competency of the members which will lead to still more value creation.¹⁾

Of course, this loop can be either good or bad. Because if for some reason the value creation of the community falls, then the attractiveness falls, the quality of new participants also falls, as does the average competency and the value reduces still further.

Hence it is important to manage these types of feedback relationships very carefully. To disregard these relationships is very dangerous indeed.

Communities and Alliances are complex dynamic business systems, you require an understanding of the community dynamics to improve the chances of developing a successful structure



¹⁾ Source: Jarosch, Daniel (2002), Modelling Community Driver, currently unfinished paper

To deepen our understanding of the dynamics of a community a quantified model can be developed

In order to more deeply understand the complex feedback mechanisms inherent in a community we develop a model of the dynamics of the community.

When a business system or community has feedback relationships and factors that evolve over time traditional financial models cannot cope. A spreadsheet cannot cope with the complexity of the community or business dynamics. A more sophisticated approach is required. One such tool would be a computer simulation.

The computer simulation would be able to capture the complex non-linear relationships that exist between some of the drivers and would also be able to model some of the soft factors that are important drivers of success of the community such as the level of trust and satisfaction between the participants.

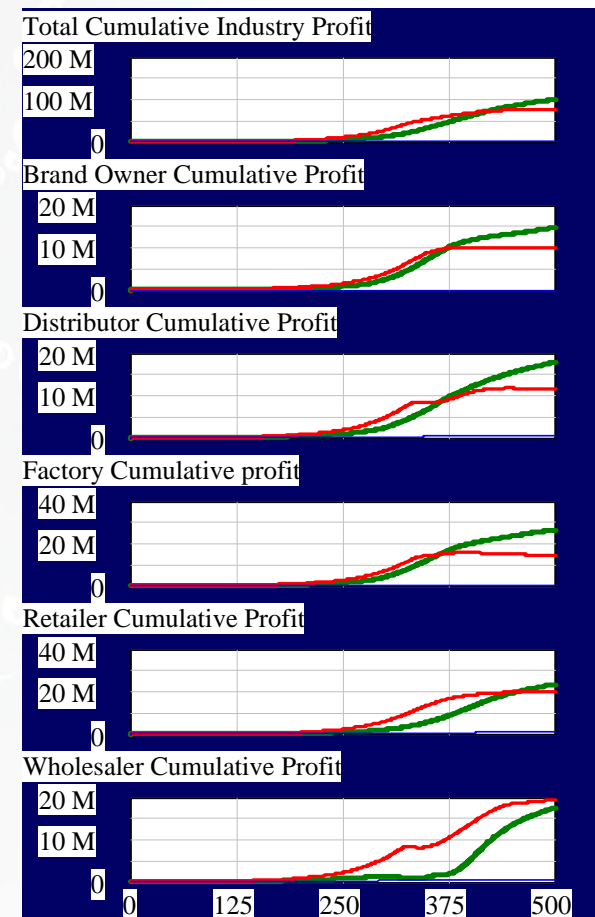
If we were to develop a simulation of the interaction between the industry participants we could use this to test alternate strategic policy decisions of the participants and explore some scenarios.

A computer simulation of the community dynamics is a powerful tool to explain the benefits of the Transformation

A computer simulation is the ultimate ‘what if’ tool which can bring these complex systems to life. We could see the effect of alternate behaviours of each of the participants on the value of the community as a whole. This is a very powerful learning tool.

For example, how much value is created by each of the participants in the as-is state versus the target state of participation in a community?

If you had a tool such as this you can use it to explain the benefits of the Transformation to the participants within the industry and convince them that they will be better off in the Transformed state.



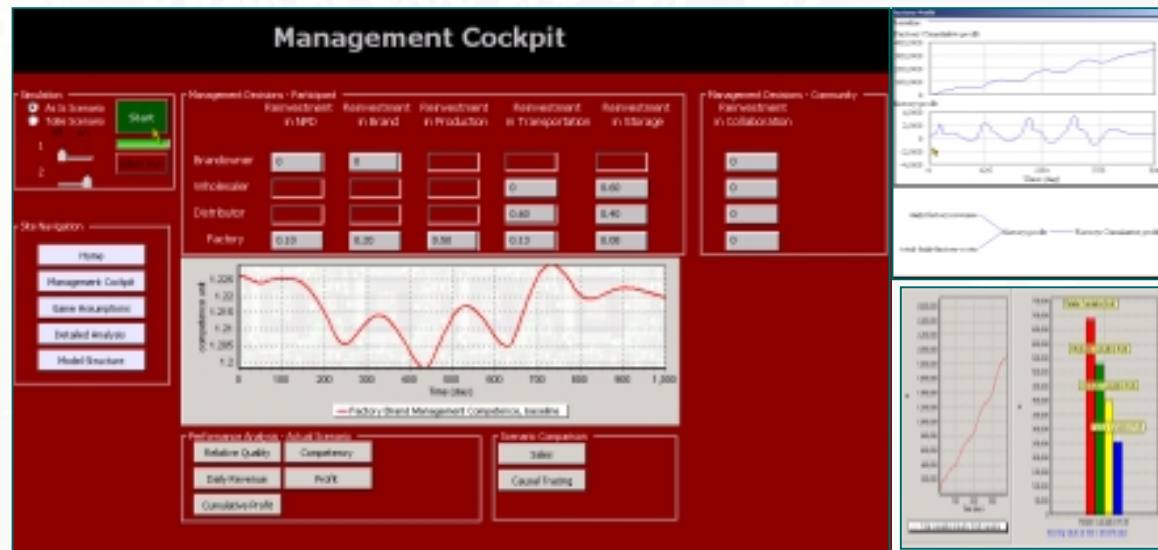
¹⁾ Source: Output of PwC Consulting Community Dynamics Simulation

A computer simulation of the community dynamics is also a powerful learning tool and change agent

Once a computer simulation has been developed it does not take much more effort to develop a user interface and turn it into a Flight Simulator. Just as a pilot interacts with a flight simulator to learn how to fly and what to do in certain situations, so to can our Community Dynamics Flight Simulator be used to understand the key drivers of success within the community.

It is always easier to make mistakes in a simulated environment rather than reality.

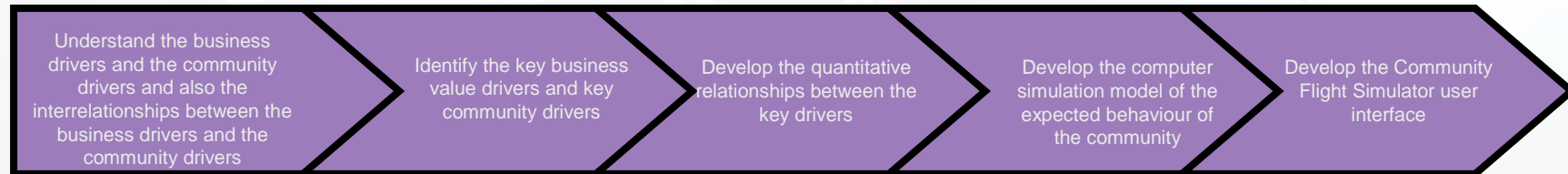
These flight simulators can be web enabled to make the simulation and its inherent learning messages accessible to as many people as possible.



Screenshot from the user interface of the PwC Consulting Community Dynamics Simulation

As a summary, the stages of development of a Community Dynamics model are shown

Depending on the scope of the PwC Consulting role in the Transformation these steps may not need to be completed. It is always wise however to at least understand the qualitative drivers of the business and the community participants.



- | | | | | |
|---|--|---|---|--|
| <ul style="list-style-type: none"> • Conduct a group facilitated workshop to identify the drivers within the business and the community? • How are they interrelated, • What are the feedback relationships? | <ul style="list-style-type: none"> • What are the key drivers of value within the business and the community? • How are they interrelated? • What are the feedback relationships? | <ul style="list-style-type: none"> • Capture the relationships between the drivers • Are there any non-linear relationships? • Interview with management to ensure relationships are valid | <ul style="list-style-type: none"> • Develop the computer simulation to enable the testing of alternate strategic policies and scenarios • What can we learn from the simulation? | <ul style="list-style-type: none"> • Develop a flight simulator as a learning tool and change agent • Can this be used in the community development stage to convince participants to join? • Should this be used to educate members? |
|---|--|---|---|--|

As a point of reference, the understanding of the qualitative feedback relationships and taking a holistic approach is a methodology known as Systems Thinking. The quantitative approach to understanding the feedback and system as a whole is known as System Dynamics which is a computer simulation methodology.

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