

Management problem
solving – systems
intervention strategy
(sis) and soft
systems...



Abstract

The purpose of this paper is to develop application of both Systems Intervention Strategy (SIS) and Soft Systems Methodology (SSM) in the situation of a "Cement Business" which will be discussed through the paper.

"Following the two applications, we will consider the issues we learn from these two methodologies, their distinguishing and contrasting characteristics and their potential for combined or complementary application of system thinking to management problem solving."

Soft System Methodology (SSM)

SSM is a methodology developed by "Professor Peter Checkland" for "Soft Problems". There are seven stages in the SSM that we will apply them one after another to the problem of Cement Business.

1. Learning about the problem situation.

The administrative staff works with two groups of staffs. The first group is Sales staffs that spend most of their time on the road trying to win the orders from any part of the country. Once they manage to get an order, administrative will be informed. Administrative staff then gets the order and starts planning the production.

The second group is the Particular Sales Staff that administrative staffs often work with them. Their request has more priority than sales staffs taken orders. This means that if a particular sales staff and a sales staff request an order at the same time, the particular order will be selected first. This causes

a delay to order delivery to non-particular requests or even may cause another plant get the order. This is what the staffs are concerning about and they want too find a solution for it.

2. Expressing the problem situation.

In figure one, the structure of the cement business is shown. Cement business itself is a part of a major conglomerate in UK that has separate plants scattered around the country. Each plant may produces the same cement product as another plant at the same or different region does.

In figure two, the entities inside the current Cement Business and their relations are shown. In this figure, both plant1 and plant2 are competing on the upper order. The middle order is only requested by Plant2. The lower order is given to the plant1 by a particular staff. Administrative

Figure 1 Structure of the cement business inside a major conglomerate.

Figure 2 Relation of entities inside the Cement Business

staff decides to select it and the upper order will face a delay unless it is selected by plant2.

3. Root Definitions

" The purpose of the root definition is to express the core purpose of some purposeful activity system." In table 1, every entity that has a kind of input and output with the system is stated. Each person sees the system on his/her own view.

INPUT OUTPUT FROM THE EYES OF:

Get the ORDER Inform the Admin Sales Staff

Get ORDERS Plan the Production Administrative Staff

Get Completed Order

Un-completed OREDR to Sales Staff Customer

Get Completed Order Inform the Admin Staff Particular Staff

Table 1. Different views of input an output of the system

4. Conceptual Model.

Figure 3 Conceptual Model based on Table 1

Having the root definition of the system, we can draw the conceptual model.

5. Comparing conceptual model and real model.

In this stage, we try to compare the conceptual model with its real model.

We need to give the access to an order to only one staff at the same time.

We need to reduce the points between the particular staff and the administrative staff. We also need to use a group of staffs and a group of administrative staffs.

6 and 7. The next stage is to see if the we can implement the conceptual model in real world or not. In fact we are going to check the feasibility of this model. If the answer is YES, we can start implementing. It is better to have

another review from step one to seven in order to check that the system is working correctly or not. We need to repeat this cycle again and again until no problem gets discovered in the system.

System Intervention Strategy (SIS)

In order to have an intervention strategy, first we need to define which persons or entities are involved in the problem. In fact we need to start with the biggest problem in the system and to find the reasons for it. In our cement business model, one of the problems is regarding the priorities that cause some delays in planning the production in the system. A particular staff asks the administrative staff to perform an order. This will force a delay to the order that is taken by the sales staff and even may cause another plant to win that order. Please view the Figure 4. We also need to know who first faces with the problem? The answer is the sales staff. They win an order and when they pass it to the administrative staffs they may be busy at the same time.

Figure 4. The Cycle of Problems in Cement Business

The second step is to estimate the readiness of the system to change. The participants are known and we know where the problem comes from. We have to check whether we can restrict the amount of direct contact between the admin staffs and the particular staffs. It is possible but we need to add more sale staffs and ask the particular staff to request to sale staffs for their order. We also need to limit the orders of each region to its own plant. In this way we can make sure that the orders will be done without any competition with other plants.

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The third step is to select the changes needed to the system. Selecting the reverse cycle

Figure 5. The reverse Cycle that solves the problems

above can solve the problem.

The fourth is to look at the problem from alternative perspectives. From another perspective the reason may be something else. And the next one is to compare the costs of doing nothing with the costs for the change? We know that if we change the system, we will face with less missed orders in long term. So we decide to change the system. We need to set goals and plan necessary activities. The next step is taking action and making necessary changes. We may repeat all the above steps till the problems get resolved.

Answer to question 2

Considering the two above methodologies, we can learn that it is much better to analyze a system first to find the source of the disaster before completely changing the system, no matter how complex it is, SIS and SSM are great methodologies that can help finding problems in any hard or soft system.

SSM is widely used for "organisational process modeling" in soft and complicated systems or regular systems but the main use of it is in situations that it is difficult to define the problem exactly. The problem includes a wide range of the system. System analyst can not say that if a part of the system works wrong. It just may have bad inputs. Maybe the system components
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are not well organized. The analyst only tries to discover the problem situations. Problem situation means the entities dealing with problem but not the exact problem because it can not be discovered directly. The process continues till the analyst, creates a conceptual model of the system. Then he or she tries to adapt the old system to the conceptual model as much as possible.

The overall process may repeat till all the problem situations get disappeared.

SIS systems has some advantages. They can be applied to both hard and soft problems. The analyst starts by finding the exact problem and tries to resolve it as much as possible due to some factors like feasibility, costs, etc.

After the analyst reaches to the idea that solving the systems problem can be less costly than leaving it as it is, he/she starts fixing the problem and repeats all the steps again and again till the problem solves.

The idea of combination of two methodologies may be good in small problems and hard problems because SSM can not be applied to Hard problems. It is only developed for the situations where a vast number of people are involved and a great deal of processes are running in the system. In such a situation it is hard to discover the real cause of a disorder in the system but we can find the problem situation. In the cement business, sales staffs are the people who report of a malfunction in the business that causes other plants to get their orders and win in the competition with them. Once the report from the staffs is received, an analyst team will be performed to analyze the problem situations. They start finding the people that are in <https://assignbuster.com/management-problem-solving-systems-intervention-strategy-sis-and-soft-systems-methodology-ssm-41559/>

relation to the malfunction and they try to resolve the problem via SSM methodology techniques.

Overall, both methodologies are robust and each one can perform a solution to huge businesses with great population and large complexity.

References

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