Using Models

Models are used to describe and clarify. As part of this process, several types of models are used. Architectural models describe, using diagrams and text, what the components are of a system and how they fit together. An architecture does not describe the processes that are involved and which flow through the components. Operational models describe the processes that are involved and which flow through the architecture.

An example is the architecture of a building. It is typically shown in architectural drawings, "blueprints", and depicts the different parts of the building, what it looks like, how the different rooms are arranged, where the doors and windows are, where mechanical support like HVAC is located, etc.

The architectural drawings are models of the architecture of the building.

If the building is a Parts Distribution facility then you would expect to see depictions of loading docks, wide spaces, perhaps office rooms. Figure 1 shows an example of a simple blueprint of a Parts Distribution facility.

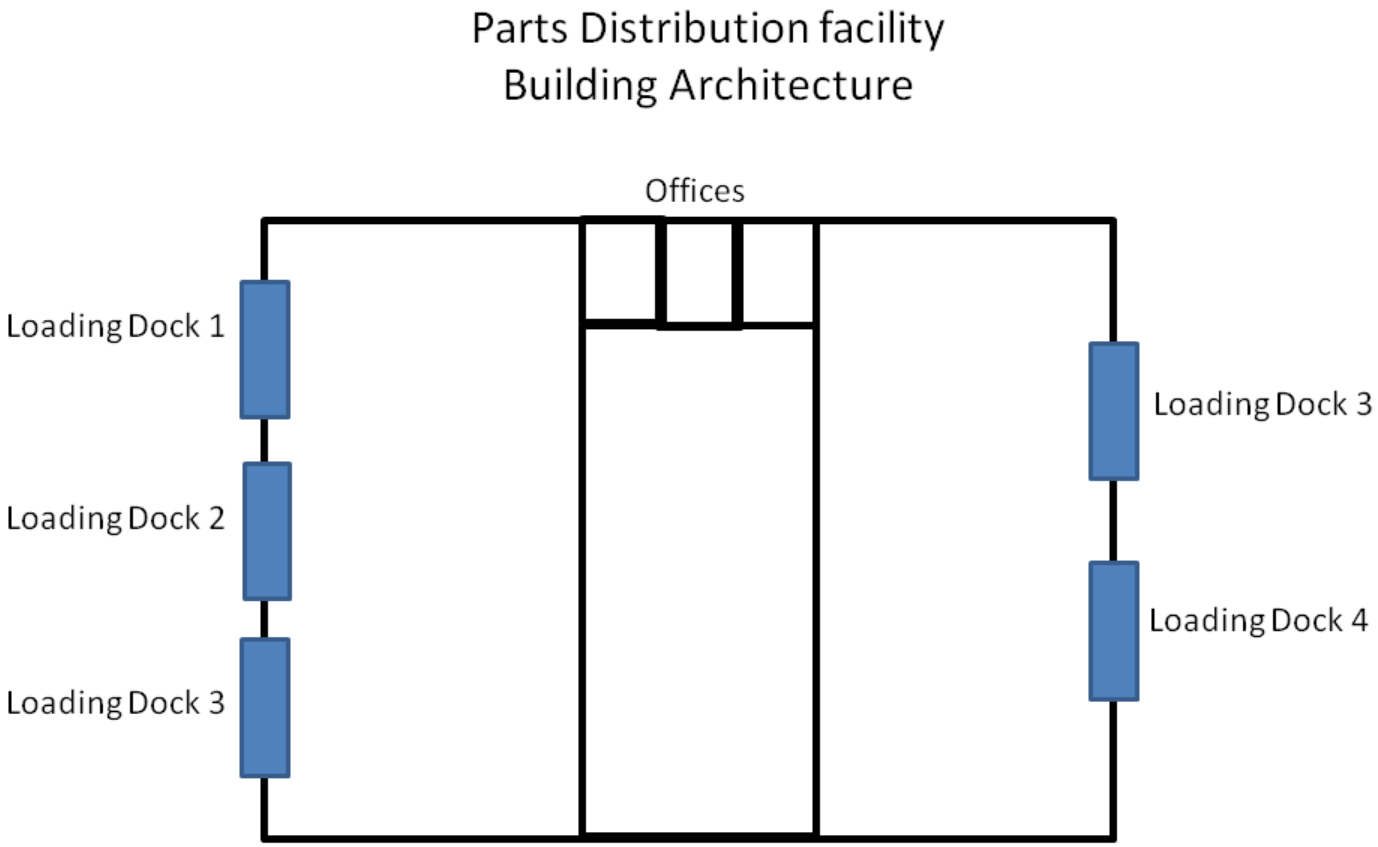

Figure 1

Notice that the architectural drawings for the facility do not describe how the building will be used or what the

processes are that are happening in the building.

To show the processes and activities which will occur in the building you can use an Operational Architecture and an Operating Model. The Operational Architecture will show the components of the operation e.g. process for moving materials, process for loading trucks, process for inventory, process for billing, process for shipping, etc. Figure 2 shows an example of a simple Operational Architecture.

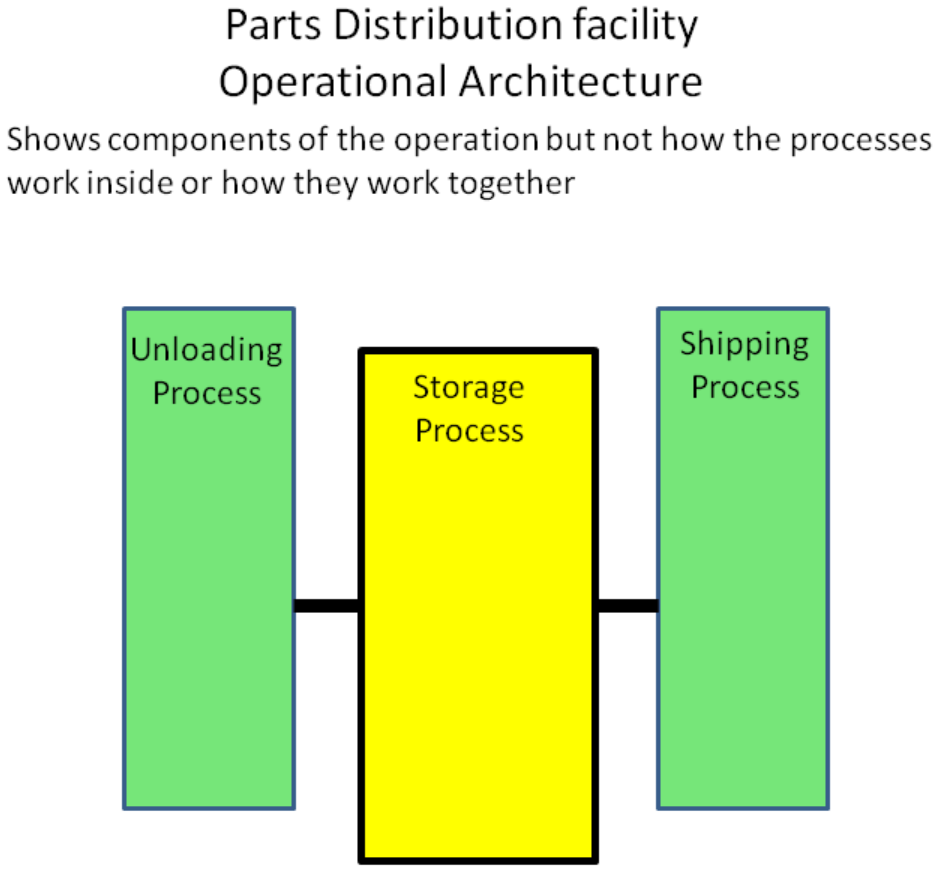

Figure 2

But again, the architecture does not describe how these different processes work together. To show how the processes work together you take the components of the Operational Architecture and draw lines between them to show processes that flow through them. You label the lines to say what is happening e.g. "Parts are moved from the storage area to the loading area." The resulting diagram is your Operating Model. Figure 3 shows a simple Operating Model for the Parts Distribution facility example.

Parts Distribution facility
Operating Model

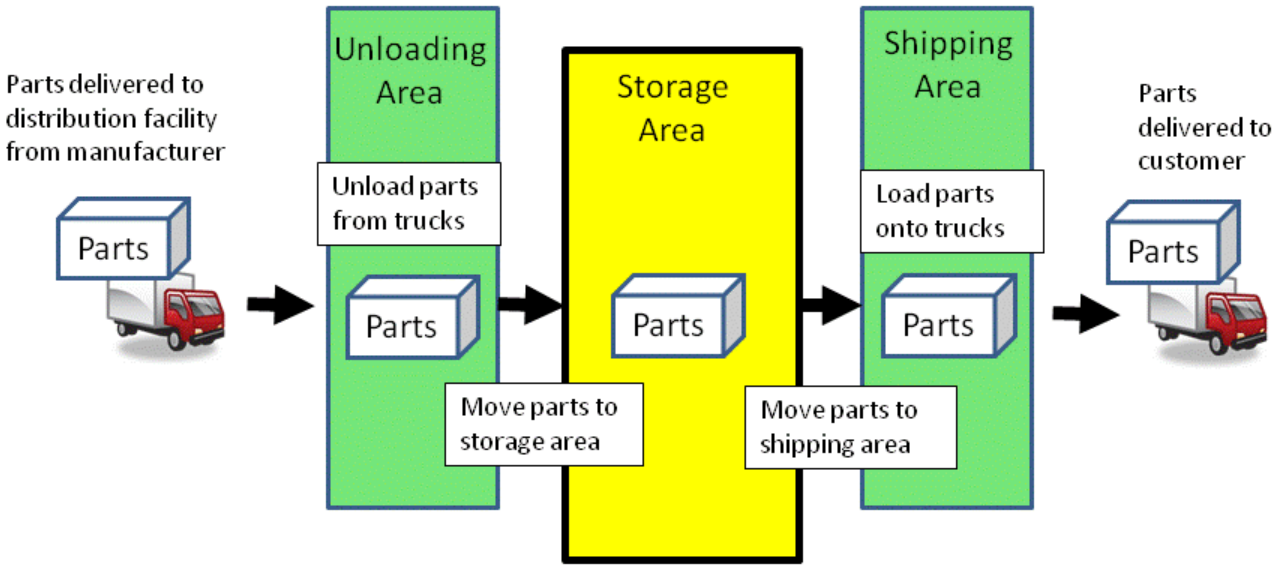

Figure 3

The process of using the Architectural design to create the Operating Model is called Engineering. Engineering is the design of structures, machines, processes, and systems. We represent this design here using the Operating Model Figure 3 above.

Finally, to have a comprehensive model of the Parts Distribution facility we overlay the Operational Architecture and Operating Model onto the blueprint of the physical building. A comprehensive model should show the individual viewing the model all the essential components involved, including scope, processes, and any other information necessary for the individual viewing the model to understand what you are trying to communicate. For our example, we can see what the layout of the building is, what the processes are that will be happening in the building, and how those processes will operate. See Figure 4 below to see our final model of the Parts Distribution facility example.

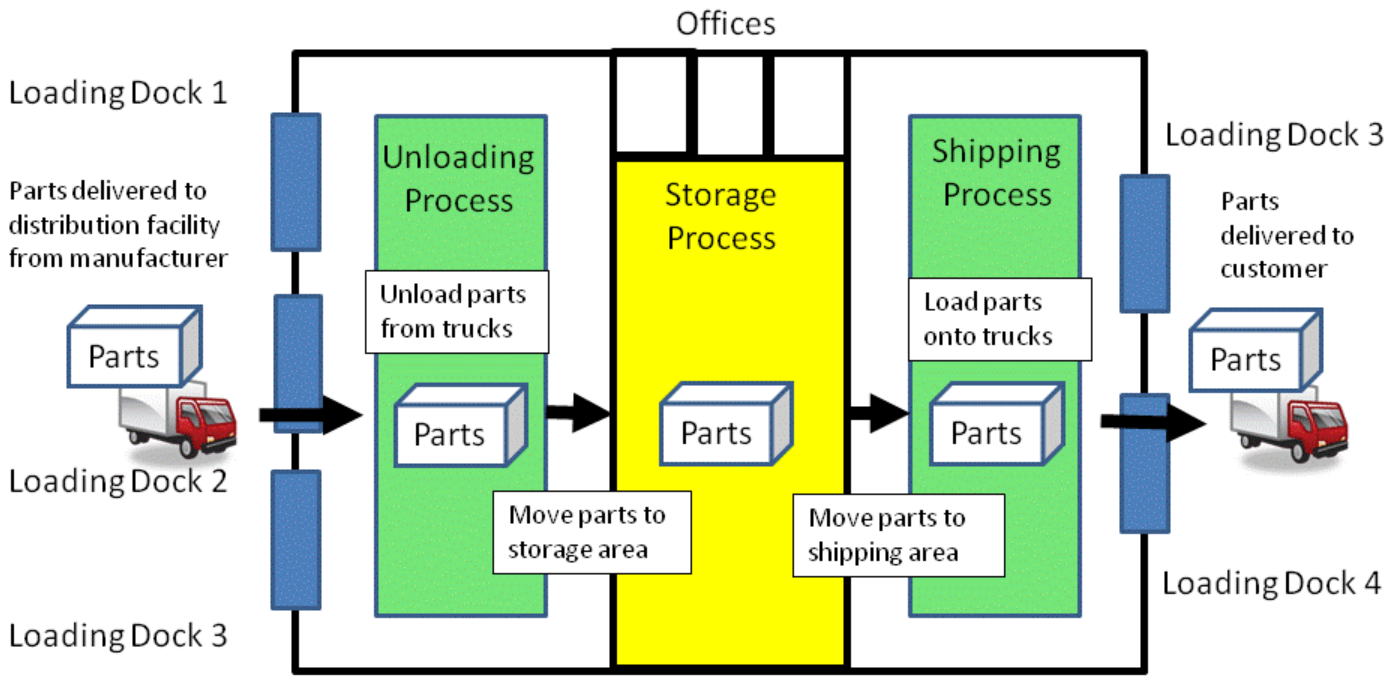

Figure 4

Now imagine if someone only provided you with pages and pages of text that described the facility and the operation. First, you would have to read all the text and then get an idea in your mind (a model) of what the facility looked like and how it worked. Your understanding may or may not reflect the real architecture and operation. It will depend on how well the text is written, how familiar you are with the specific technical information being related, and how much information was being presented. How much more easier and clearer is it be to have a picture of the facility and flowcharts showing the processes as in the example figures above? This is why effective modeling uses both diagrams and text.

You can now see now how models can be used to describe and clarify.

The more complex the architecture and processes, the more important it becomes to have accurate models to help you understand what is going on.

The SSAF view

We use models to describe the architecture of the social order and the processes that are happening inside it. This is the most effective way for a citizen to understand clearly what the architecture of the social order is and what is happening inside it. It becomes critical when people in government and business are working to confuse the citizen and to hide unethical and criminal control of the government, businesses, and social institutions. If the only people who understand the architecture and operating models of the society are the people who have been compromised by the oligarchs, then there is no way that the citizenry can claim to be alert or knowledgeable about the social order. Worse, an ignorant citizenry is completely vulnerable to the manipulations of the oligarchs because the citizens cannot tell truth from lies.

Models are used by the scientific, engineering, and business communities as a standard method for describing and clarifying the systems they design, build, and evaluate. Modeling is a proven process. However, the average citizen receives no training in modeling as part of their education. Without an understanding of how to use modeling, how could an average citizen use modeling to describe and clarify their social order even if they wanted to?

Using models to perform analysis, evaluation, and planning

Models are also used to perform analysis, evaluation, and planning. Using our Parts Distribution facility example, we started doing an analysis when we used to model to find out how much time it takes for parts to be moved around the facility. Analysis gives you the data about what is happening. Evaluation is where you take the data, compile it into meaningful information, and then make decisions on the information based on what you are trying to accomplish.

The detail of any model is directly related to the manner in which the model will be used. To continue our Parts Distribution example, if we are trying to understand how long it takes to more parts through the facility, then any line on our Operating Model would be labeled in more detail. For example "Parts are moved from the storage area to the shipping area by forklift and the average delivery time is 5 minutes." If all the lines on our Operating Model are labeled with a time element like the example, we could add up all the times and understand how long it takes for parts to move through the facility and between any process. This could be very important if the time it takes to get a part delivered to a customer is something that makes our business more effectively and successful. See Figure 5 below.

Parts Distribution facility
Operating Model overlayed onto Building Architecture

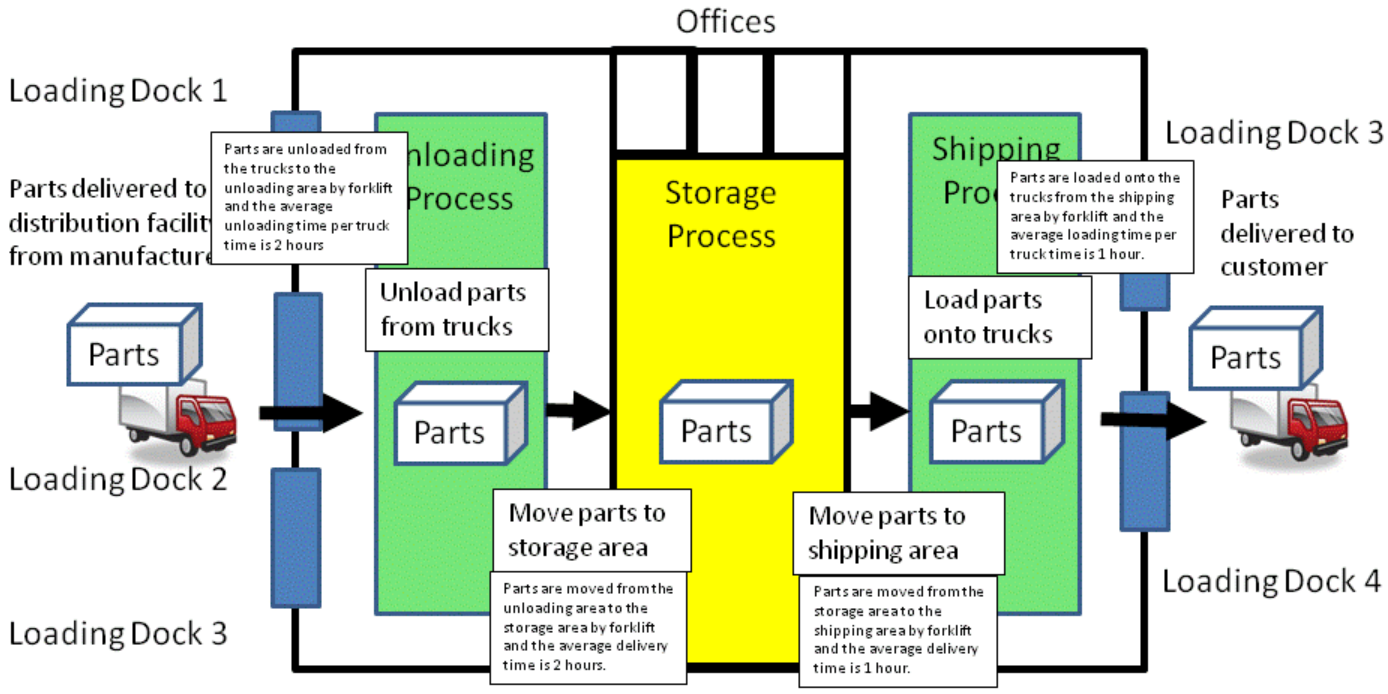

Figure 5

Using our Parts Distribution model we could evaluate how much time it took for parts to be unloaded from trucks and then moved from the loading area to the storage area. Say it takes 2 hours to unload the parts from the trucks and another 2 hours to move all the parts to the storage area. If it takes just 1 hour to move the parts from the storage area to the shipping area, then we know that the people moving the parts from the storage are area to the shipping area are going to have to wait for the parts to be moved to the storage area because they are moving faster than the people moving the parts from the unloading area to the storage area. Knowing how long it takes to move parts from one area to another is data. Knowing the time it takes to move parts from the unloading area to the storage area in relationship to how long it takes to move the parts from the storage area to the shipping area is information. Information is data that is seen in context and relationship with other data.

Now we can decide what to do about the situation we have evaluated. We are paying everyone to work. If the people who are moving the parts from the storage area to the shipping area have to sit and wait, then we are paying out money for no work. To resolve this we can either do an analysis of the operation using our Operating Model to find out if there is other work that the people can do while they are waiting for the parts to be moved to the storage area. Or we can do a more detailed analysis by refining our Operating Model to show us the details of why it takes 2 hours to get the parts unloaded and another 2 hours to move the parts to the storage area.

The point here is that we can clearly see and understand what is happening and because we can clearly see and understand what is happening we can come up with solutions that are based on reality. We can then use our models to simulate using a new process and see how it works.

To use a model for planning purposes, you take the model and change the information in it to reflect a new architecture and/or process. Then you analyze and evaluate the new model to see if your new model will work the way you want it to. Again using our Parts Distribution model, we could make a copy of our Operating Model and change the process so that the parts are unloaded right next to the shipping area. Then the time it takes to move the parts to the storage area would be just a few minutes. By eliminating the 2 hours it takes to move the parts from the unloading area to the storage area, the parts are getting shipped faster and all the people have work to do and noone is waiting. See Figure 6 for an example of using our Operating Model for planning changes.

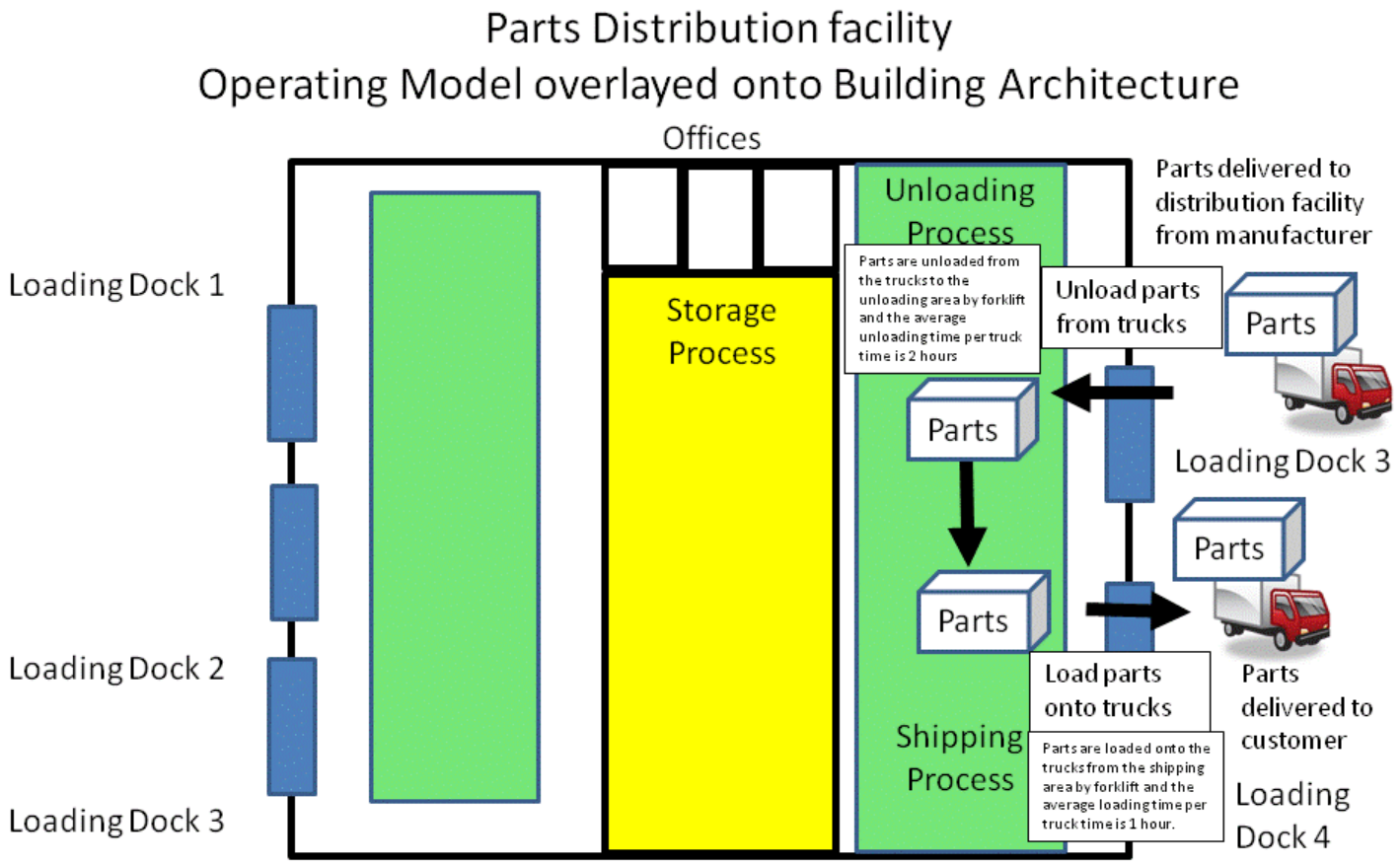

Figure 6

This type of work is part of the Solution Design process. It involves documenting what is happening in the current state, seeing and understanding what is happening in the current state, and then simulating (making a model of ideas) changes in order to see if a solution will work.

A very important value of using models for Solution Design is that you will be able to see the impact that changes may have to the system you are proposing to change. Look at Figure 6. Notice that now all the activity (unloading parts, moving parts, and loading parts) is taking place on one side of the facility. The other side and the storage area are not being used. What does this mean? Several things come to mind. Perhaps we can rent the other side of the facility to another distribution company. That way the other side of the facility is being used and we will be generating more income for our company. Or perhaps we can start handling more parts or a different kind of parts on that side of the facility. This would mean expanding our business and making it bigger but with minimal cost because we already have the building area that we need. Lastly, it means twice as much traffic on the side of the building where all the unloading, moving, and loading of parts is going to be happening. Is the design of the road and parking area on that side of the building sufficient to handle the increase in traffic?

As you can see, being able to see what changes will mean (impact) is a very important factor in planning. If you do not see what is going to happen clearly, then you will make decisions that can result in negative things happening.

This brings us to the point of how to use models to find out why things are going wrong. Using the Parts Distribution example, say that parts were always getting shipped late. We don't know why. What do we do? We take out our Operating Model and we add up all the times that it takes to move parts through the facility. When we add the times up we see that should take 5 hours to get the parts unloaded, move them to the storage area, and then move to the shipping area. But our shipping records show that it takes 10 hours to get the parts shipped out from the time they are unloaded until the time they are shipped. What is wrong? To find out, we take our model to each area and we review it with the people in each area to find out what they are doing. As we talk with them we change the numbers on our model to reflect what they tell us. We find out that the people unloading the trucks are taking 7 hours to get the trucks unloaded. We ask why and we find out that the company that ships the parts to us changed the type of truck they are using and our people cannot use forklifts to unload the trucks. Our people are unloading the trucks by hand using hand carts. That takes a lot longer than using forklifts. Now we know what the problem is and we can use our Operating Model to figure out a way to shorten the overall time it takes the parts to get to the shipping area. Probably we will contact the parts shipper and ask if they can use a kind of truck that allows our people to use forklifts to unload. But that is just one idea. You can think of and evaluate many many ideas before you spend time and energy on fixing the problem.

Finally, models are used to describe and clarify a system to other people. Think about how many times in a day you either tell someone something or write something down for someone, and they come back to ask you questions about what you meant. The more times they come back to you, the more inefficient the communication is. The more complicated the information, the more often they come back with questions. What you want is to give them all the information they need in the shortest possible time, hopefully just once, right? How do you do that? By using effective communication techniques. One of those techniques is to use models to describe the subject you are trying to communicate. With practice, you can get to be very efficient at communicating. But that is only half the story. Effective communication has 2 actors: the sender and the receiver. If you are the sender and you are using models that are too complicated or inaccurate, then you cannot communicate effectively. If the receiver has no background in using models, then your models will have to be intuitive (be clear enough that they do not require further explanation) in order for the receiver to use them. The best case is when both the sender and receiver know how to use models. Then you can provide much more complex models with more information to the sender and they won't have to come back with alot of questions. That is efficient and saves time and energy for everyone.

Again, the more complex the system is, the more important it becomes to have accurate models to use.

Now think about how complex a social order is. How exactly is the average citizen going to be able to clearly see and understand such a complex system? The best way is through the use of models. Unfortunately the educational system teaches people to rely on "pictures" and not on models. The difference is that a picture is a representation which is not intended to be used a a model. Models have very specific requirements as you can see from the descriptions above. Pictures are not models but pictures do make people form ideas, concepts, and opinions. These ideas, concepts, and opinions are not based on clearly seeing what is happening, understanding what is happening, analyzing, evaluating, thinking of solutions, evaluating the solutions, implementing a solution, and re-evaluating the Operating Model to see if the solution worked. Ideas, concepts, and opinions based on pictures are based on assumptions that the person "reads into" the picture.

Again, let us use the Parts Distribution model as an example. One way a person could communicate about the problem we had with the 10 hour parts shipping delay is if they took pictures of the different areas. When they took a picture of the unloading area we would see a picture of alot of people working hard unloading parts. When they took a picture of the people moving parts to the storage area, again we would see people driving forklifts carrying parts from the unloading area to the storage area. But when they took a picture of the people moving parts from the storage area to the shipping area we would see people sitting around. And when they took a picture of the people in the shipping area (assuming that they have other work to do) we would see people working. So based on that set of pictures, what would be a reasonable conclusion? That the people who were supposed to be moving the parts from the storage area to the shipping area are not working. This conclusion would be completely wrong. The people are waiting through no fault of their own. If we were to reprimand or take other action regarding the people in that area then we just make the situation worse because they are going to be angry at being accused of not doing their job.

This type of confusion and error can not happen when effective modeling is done.

Now think of what would happen if the person taking the pictures intentionally took the pictures in a way that showed the people who are supposed to be moving parts from the storage area to the shipping area were sitting around AND took the pictures showing everyone else working. Such a person would be able to manipulate us into thinking and ACTING a certain way and we would have no idea of what was happening. One way we could avoid this problem is if we insist on using our own Operating Model and doing our own analysis and evaluation like we did above in the example. This actually solves 2 problems. One is that we cannot be tricked into thinking and acting a certain way. The second is that we then will be able to suspect that the person was trying to manipulate us. Further investigation and vigilance would eventually reveal what was really happening: the person was trying to manipulate us and they are not to be trusted.

The bottom line is that if we don't do the work ourselves to be able to clearly see and understand what is happening then we run a very great risk of allowing someone else to deceive us and use us for their own gain.

The type of deceitful and manipulative behavior is typical of a psychopath. This is what government, corporations, religions, and any other organization do when infiltrated and controlled by psychopaths. Unfortunately modern society rewards and promotes people with these type of characteristics so we are at risk in many areas of our lives. The biggest risk, and the one that SSAF is focused on addressing, is the situation where large numbers of people with psychopathic behavior have established themselves in controlling positions of all our social institutions.

The SSAF view

Our view is that citizens must receive training and education in the creation and use of models. The goal is that the citizen will then demand that Social Architectural and Social Operating models be provided and maintained which accurately show what is really happening. The citizen will then have models that they themselves have created and which they will use to verify the models that they have been provided with. Just like our example above, if the government, religion, corporation, or whatever is providing the citizen with "pictures" designed to deceive and manipulate the citizen, using modeling the citizen will have techniques and tools to counter such deception.

It is likely that the reason that this type of analytical thought and methodology is not taught to the general population in the educational system (and when it is in science, engineering, or business it is absolutely not applied to social architecture and engineering) is that a population which has techniques and tools to counter deception by oligarchs is not easily deceived or controlled.

Several of the principles of Strategic Social Architecture, the framework upon which SSAF is based, describe our position on this best:

* The citizens of the society have full control of the social order they live in and will not be subjected to an oligarchic state based on privilege and power.

* Citizens develop and maintain the ability to analyze and think for themselves without the influence of any oligarch's social control mechanisms.

* The training of individuals who CAN run their own social order and who have characteristics which will not allow them to turn into oligarchs is in fact the sole mission of the social order.

In conclusion, the use of models is part of the regimen of training which SSAF citizens obtain as part of their development in order to become and remain a part of an alert and knowledgeable citizenry.

SSAF!