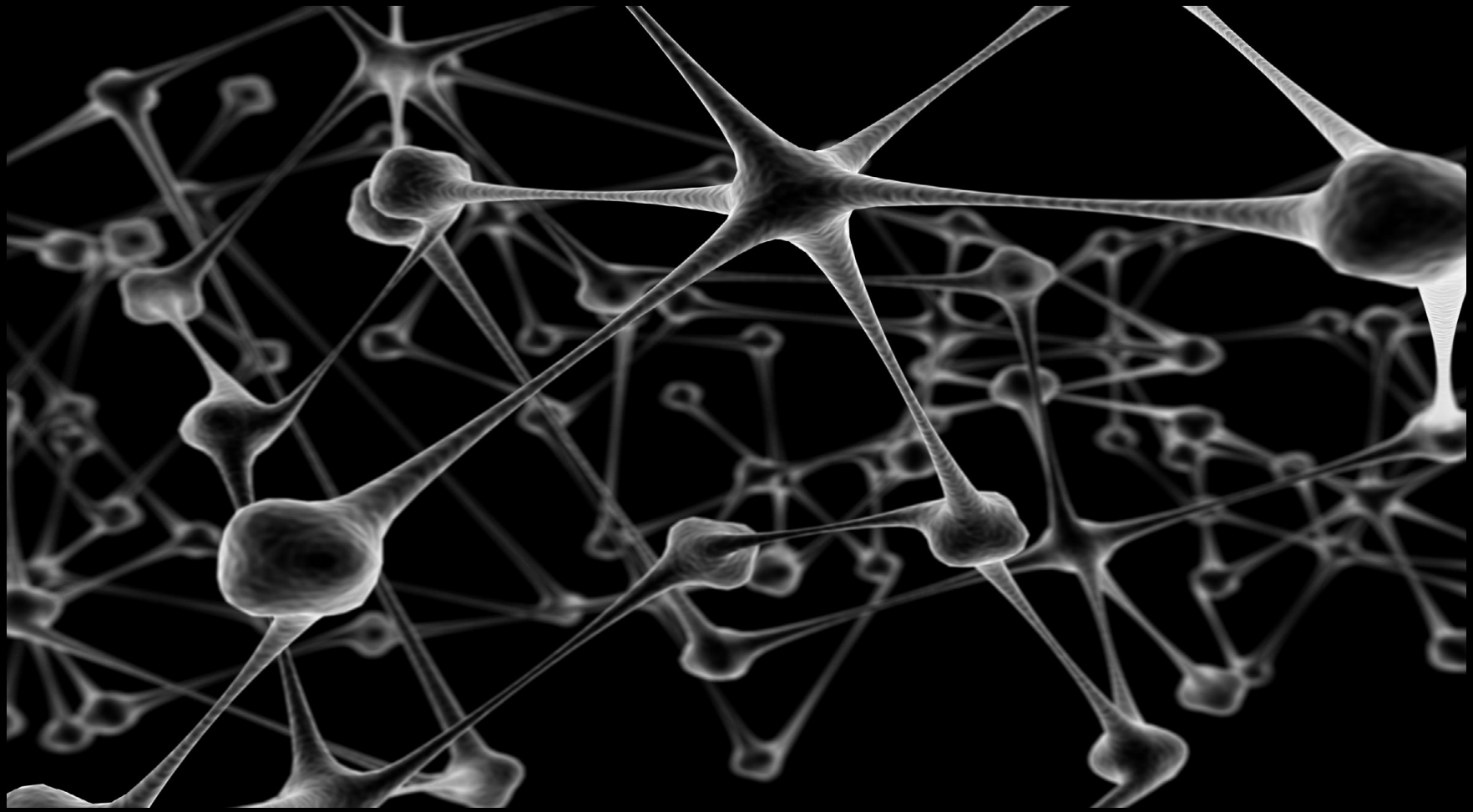


IT Asset Management in Today's Complex Data Center

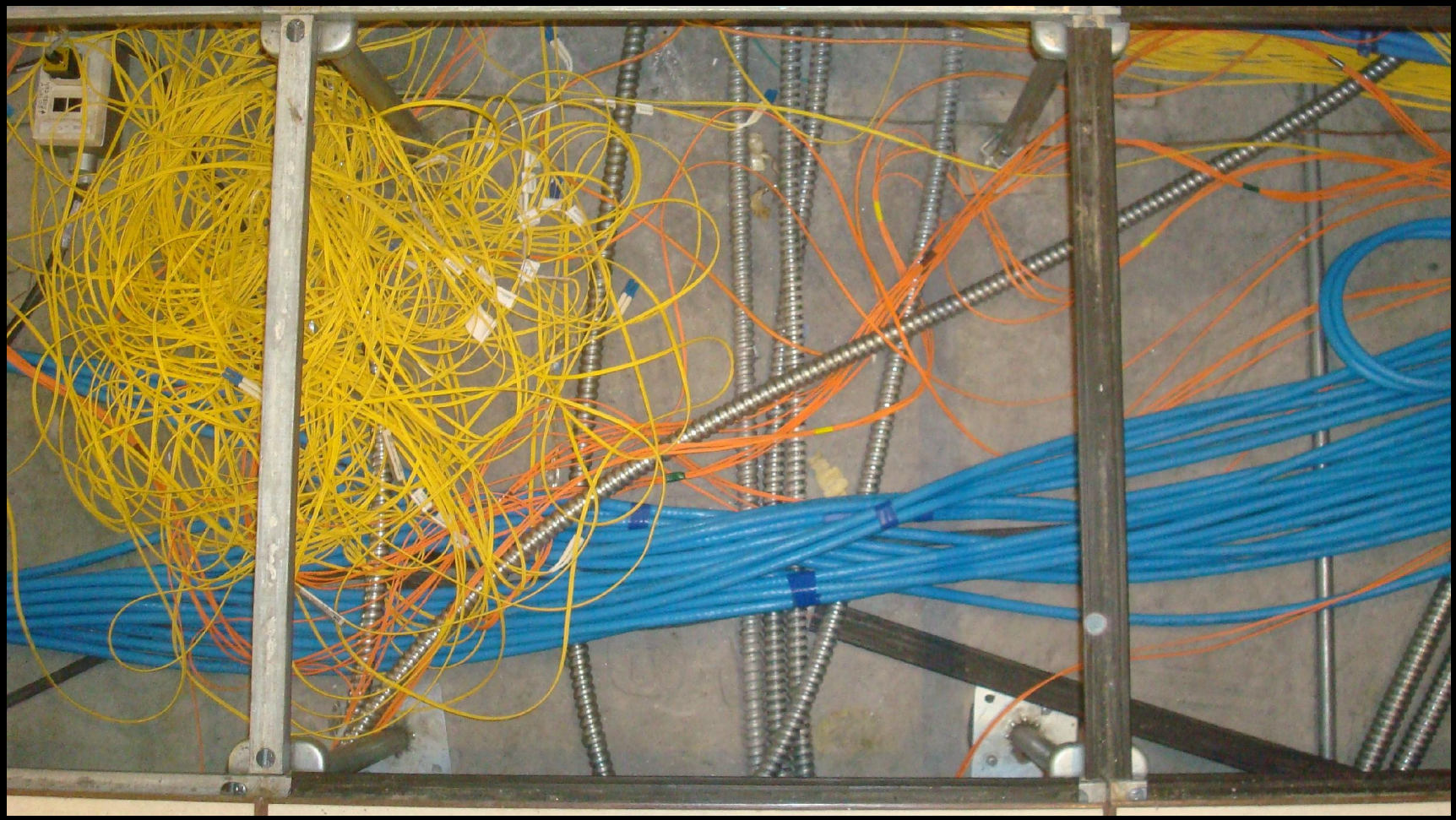
buzzetti@us.ibm.com

- The IBM Worldwide Design Centers comprise certified IT architects and specialists using state-of-the-art methodologies and technologies in the IBM portfolio.
- We work with global clients and business partners to design and architect advanced IT infrastructure solutions. Proven strategies and best-practices through years of experience.
- IBM understands that achieving real business results requires an open, integrated and adaptive infrastructure that provides a scalable, available, secure and energy-efficient environment.

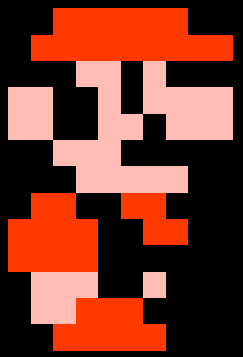
The Design Center

The business

The Future



The Problem



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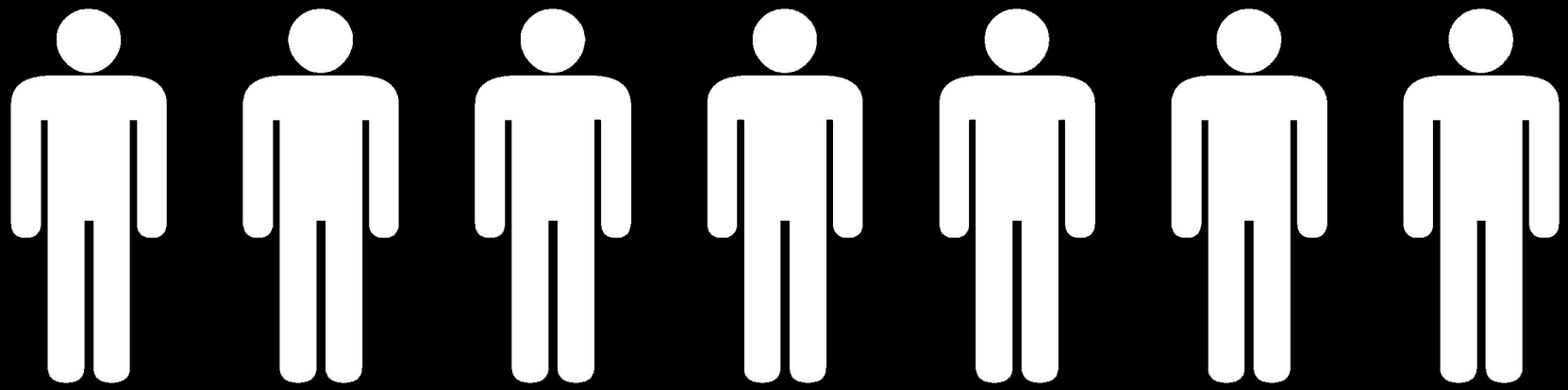

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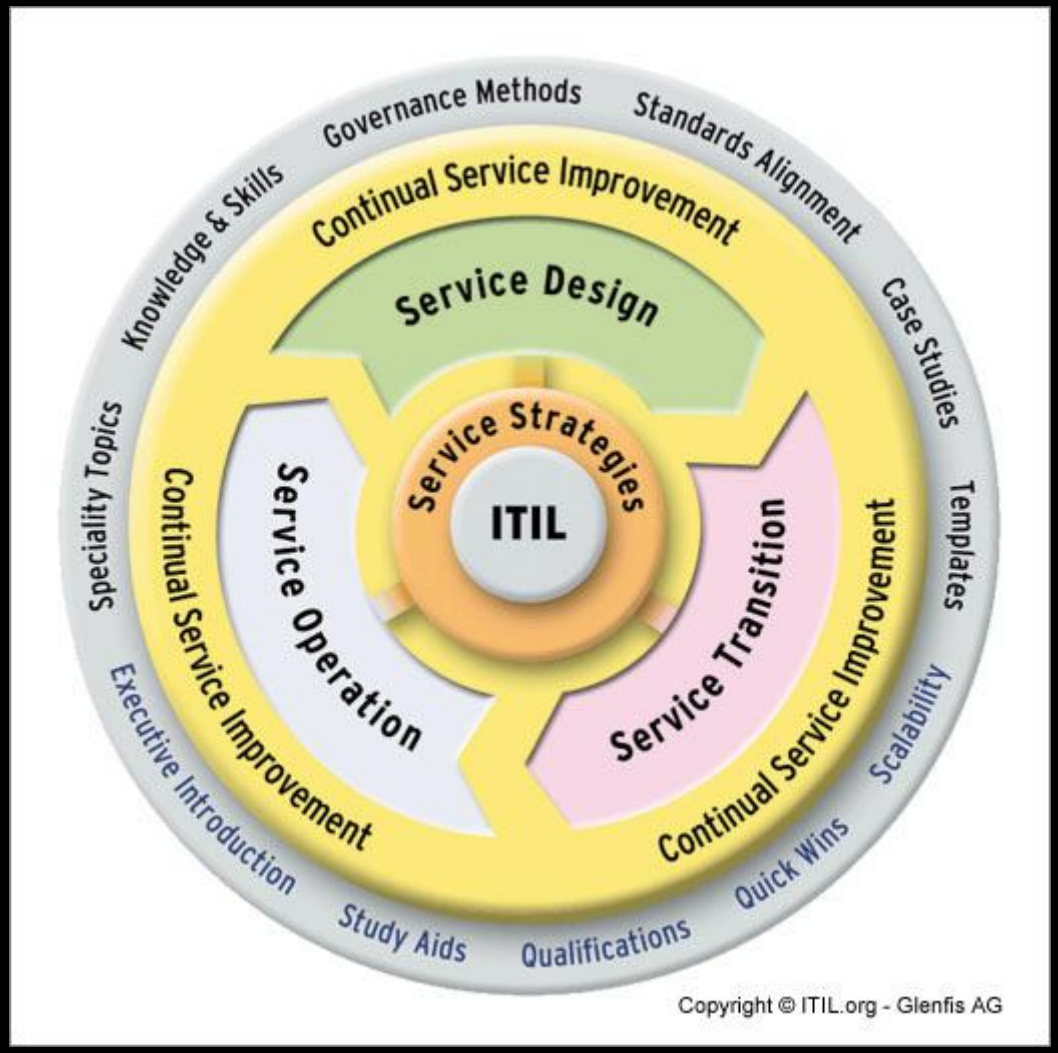
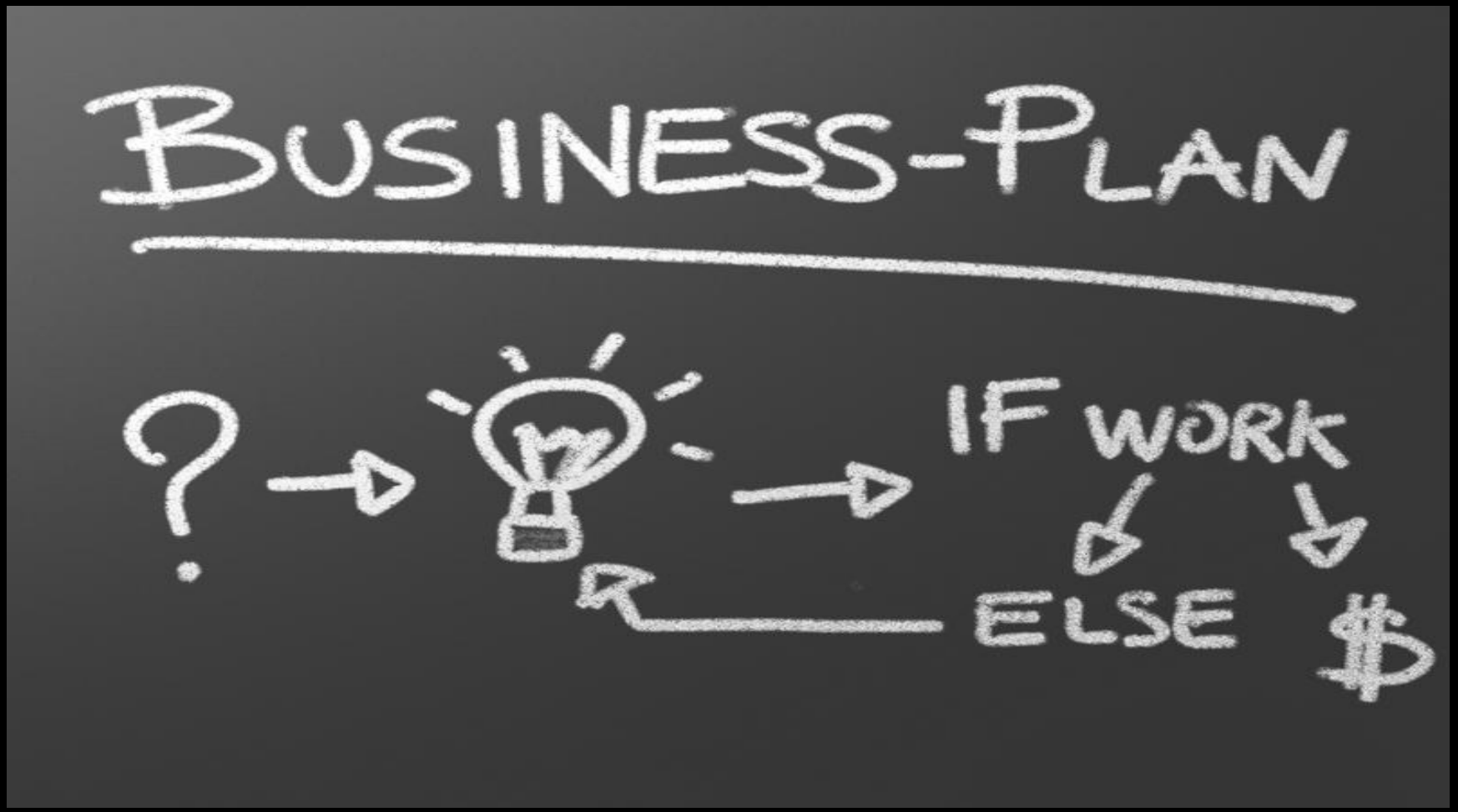
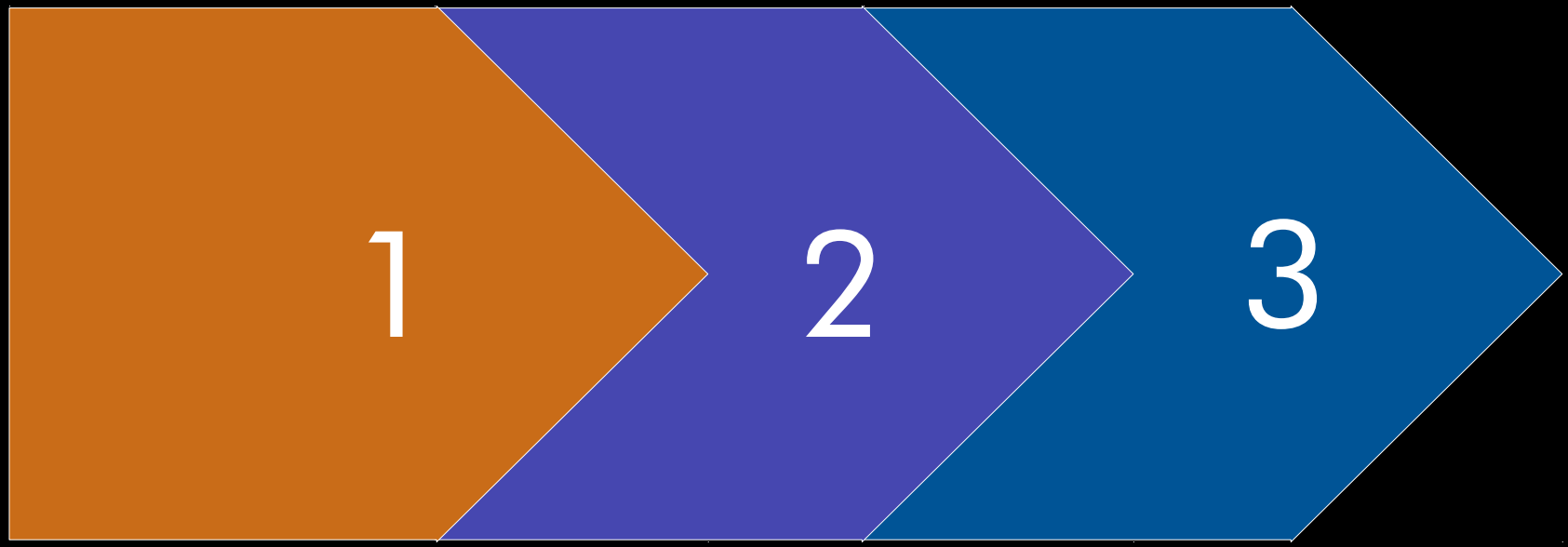

Governance Methods
Standards Alignment
Knowledge & Skills
Case Studies
Speciality Topics
Templates
Executive Introduction
Scalability
Study Aids
Quick Wins
Qualifications
Continual Service Improvement
Service Design
Service Strategies
ITIL
Service Operation
Service Transition
Continual Service Improvement
Continual Service Improvement
Copyright © ITIL.org - Glenfis AG

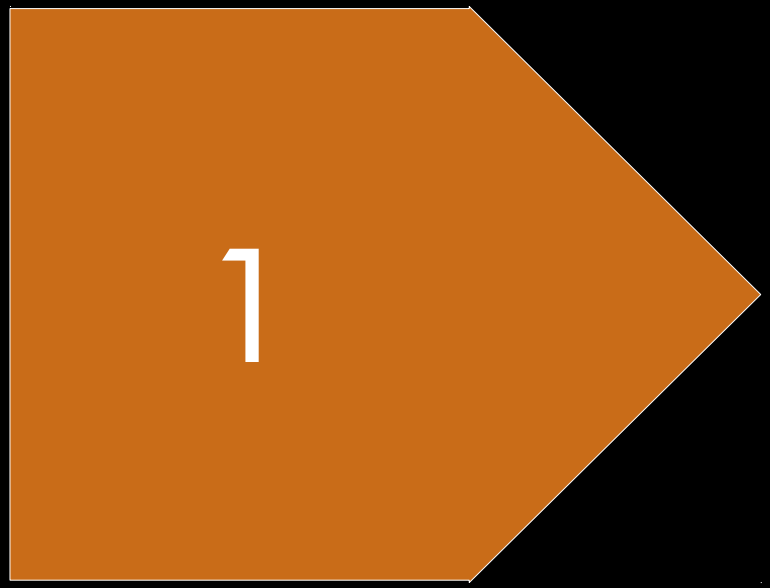
The Problem



The Idea



Phased Approach



- Goal: A single place to store and manage all assets
- Start work on the basic architectural components from Team Solution Design
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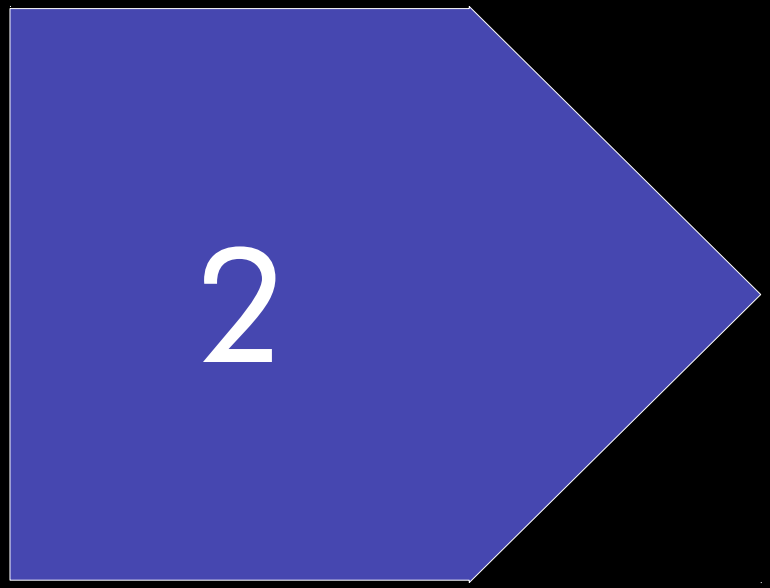
  - Functional and non functional requirements
  - Use Cases with Roles/Actors
- Import from existing assets tools

Inventory



- Focus on scheduling
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- Enable automation of different aspects of the overall benchmark process.
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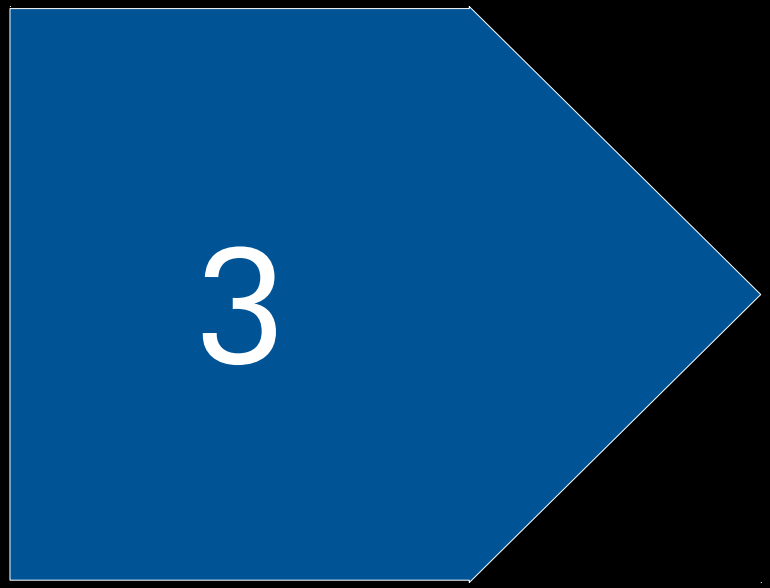
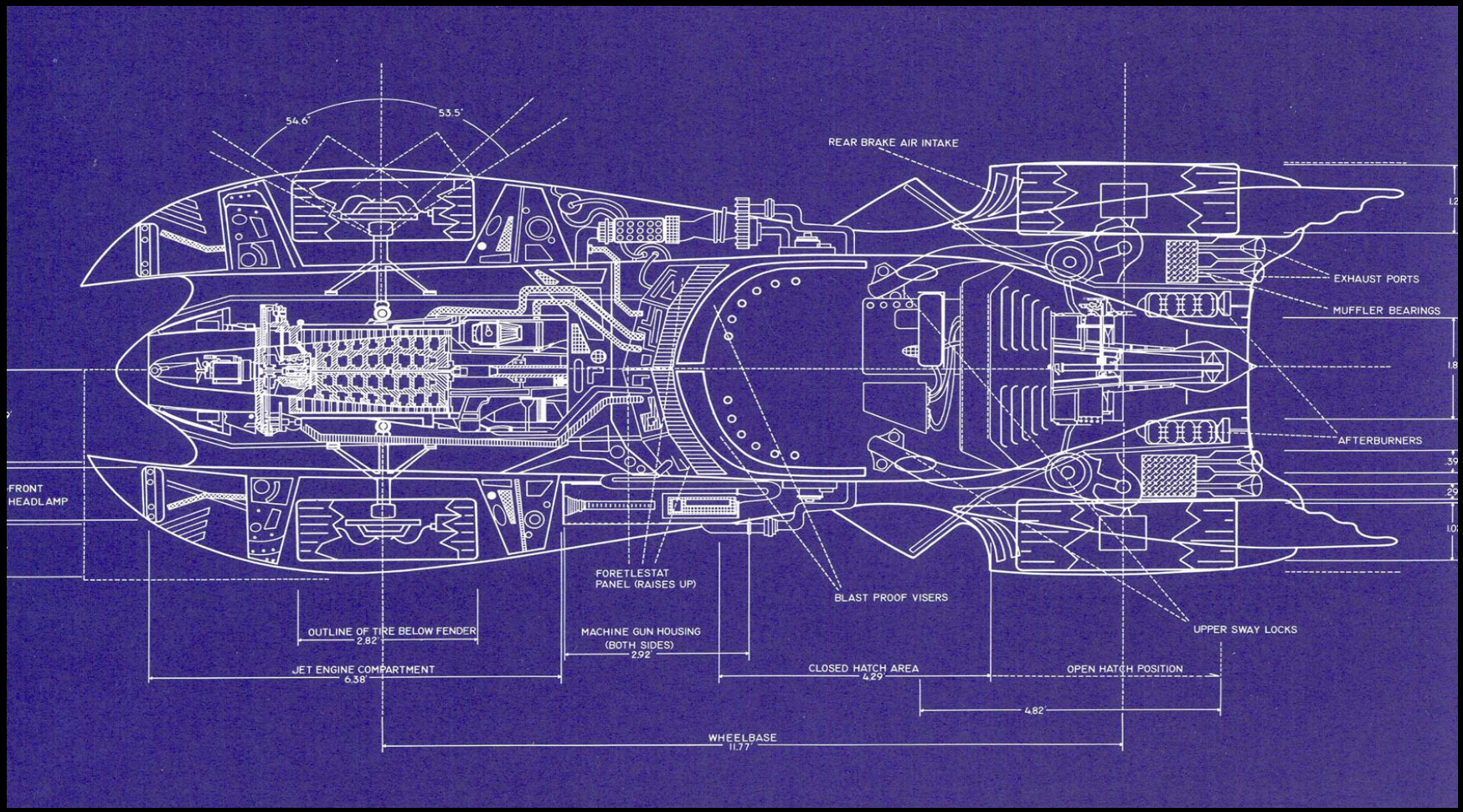
Scheduling

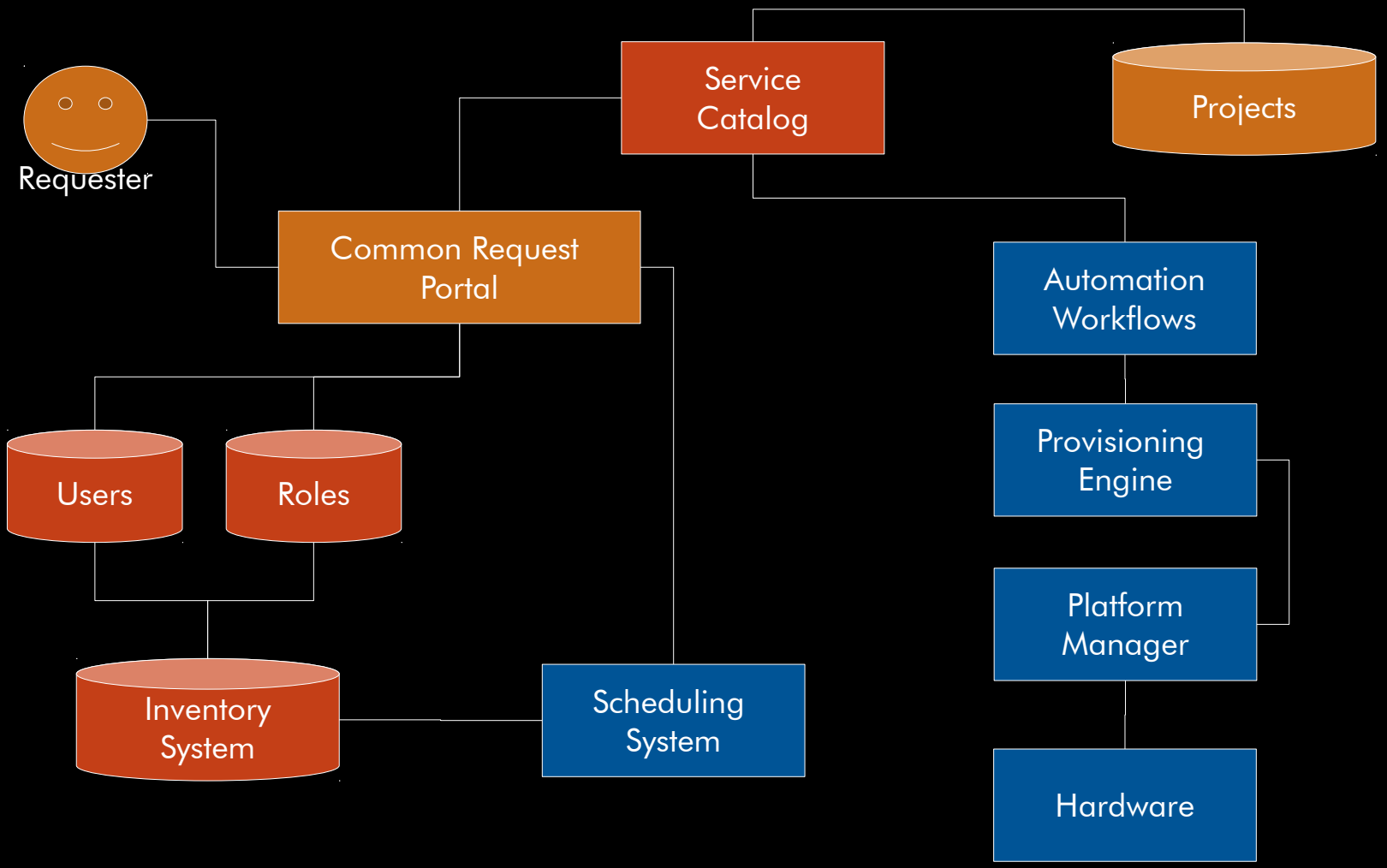


- ITIL compliance
- Self service
- Catalog of services
- Can be used by both benchmark personal and external entities

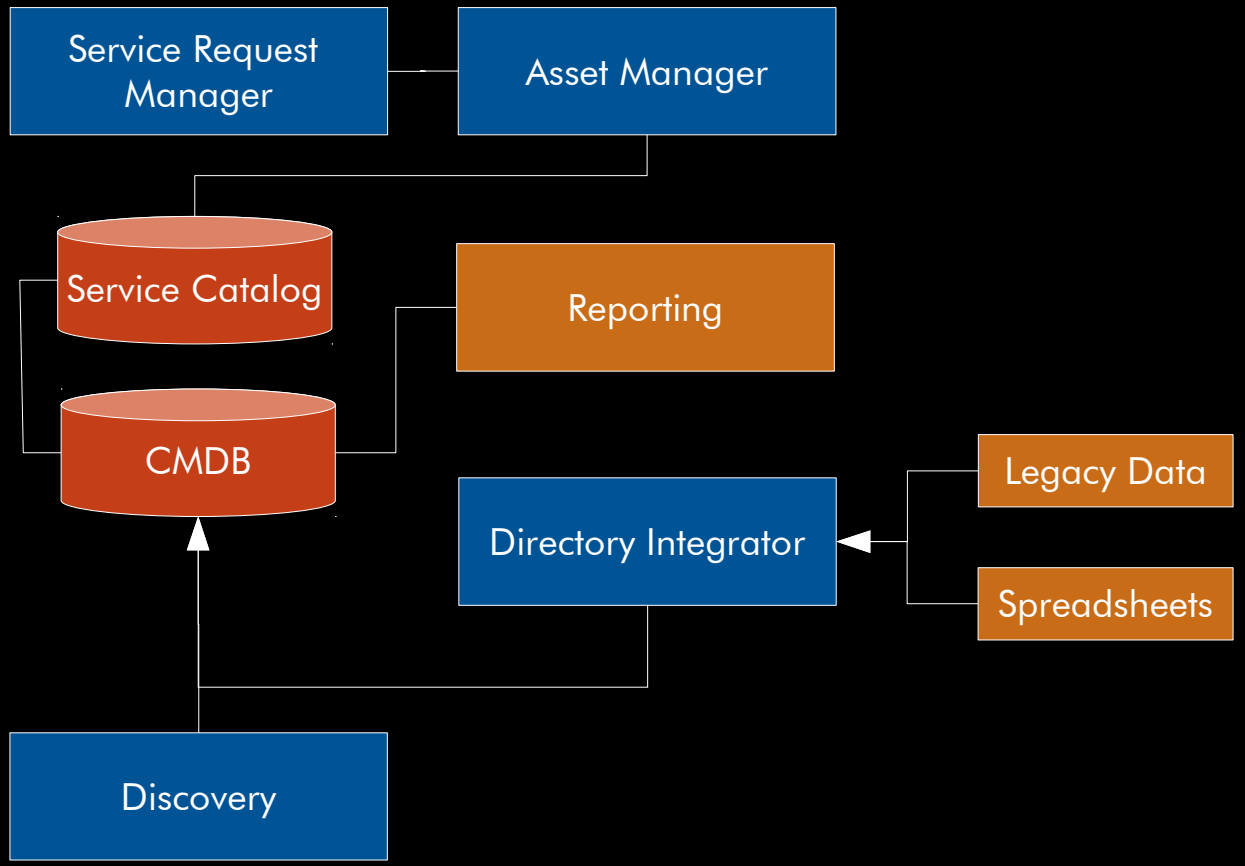
Automate



The Architecture



The Component Model



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UC-006	Add memory to a System p LPAR
UC-007	Change type of processor from shared to dedicated System z
UC-008	Change type of processor from shared to dedicated System p
...	...

The Use Cases

Usecase overview	The Requester requests to have a machine moved from one building to another
Actor(s)	Service Requester, Inventory Manager
Success	The machine is moved and the inventory system is updated
Failure	The machine is note moved or the inventory system is not updated

UC-001

Step	Actor	System
1	Requester connects to the Common Request Portal.	
2		Common Request Portal displays the Service Catalog that the actor can select from based on the access permissions.
3	Requester requests the machine locate service and enters in the appropriate information required by the service.	
4		The Common Request Portal routes the request to the Request Resource Approver.
5	The Request Resource Approver approves the request.	The Projects systems creates a work order based on the request.
6	The Hardware Administrator is notified of the request and is set the required information.	
7	The Hardware Administrator moves the machine, and updates the work item.	The closer of the work item is noted as a change record in the Inventory System.
8	The Inventory Manager is notified of the change record and ensures that the inventory system displays the correct information.	This could also initiate a network change work request, not detailed here.
9	The request is completed, the work item is closed, and the requester is notified.	

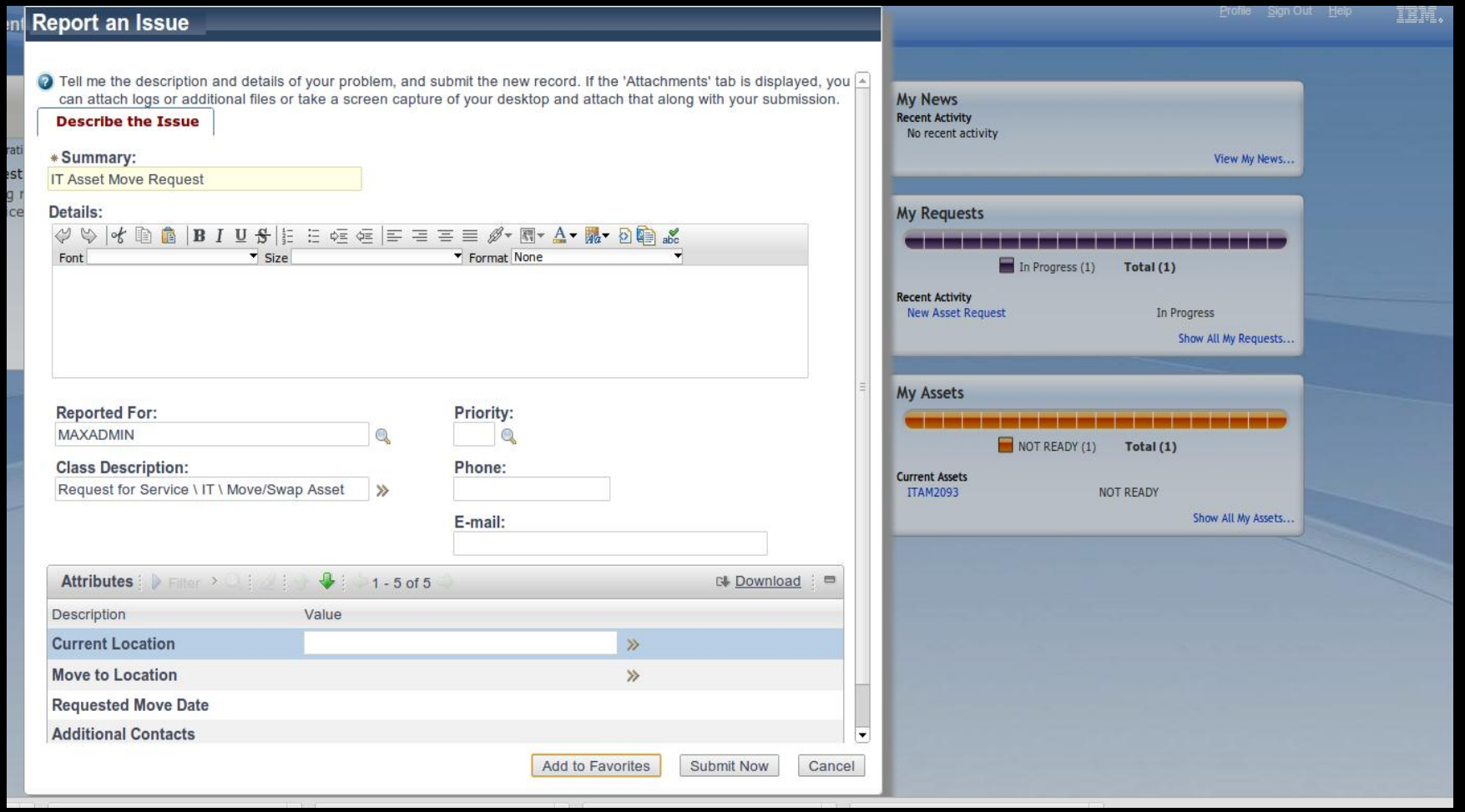
UC-001

Name	Description
Request Qualifier	Determines whether an engagement is accepted based on revenue and resource availability
Hardware Administr	Assembles and racks systems; also connects electrical power
Build Administrator	Builds everything up to the operating system
Resource Approver	Approve resource request.
Requester	Requests engagement.
Network Administrat	DNS, Switches, IP allocation, VPN.
Storage Administrato	Configures the storage zones and volumes.
Inventory Managem	Ensures that hardware is properly entered in the inventory system. Also manages sending and receiving physical assets.
System Architect	Defines the resource configuration and works with Procurement Admin to ensure proper assets are ordered
Asset Owner	Ensures that the assets are in the inventory tool correctly.
Service Administrato	Defines services; updates the common request portal

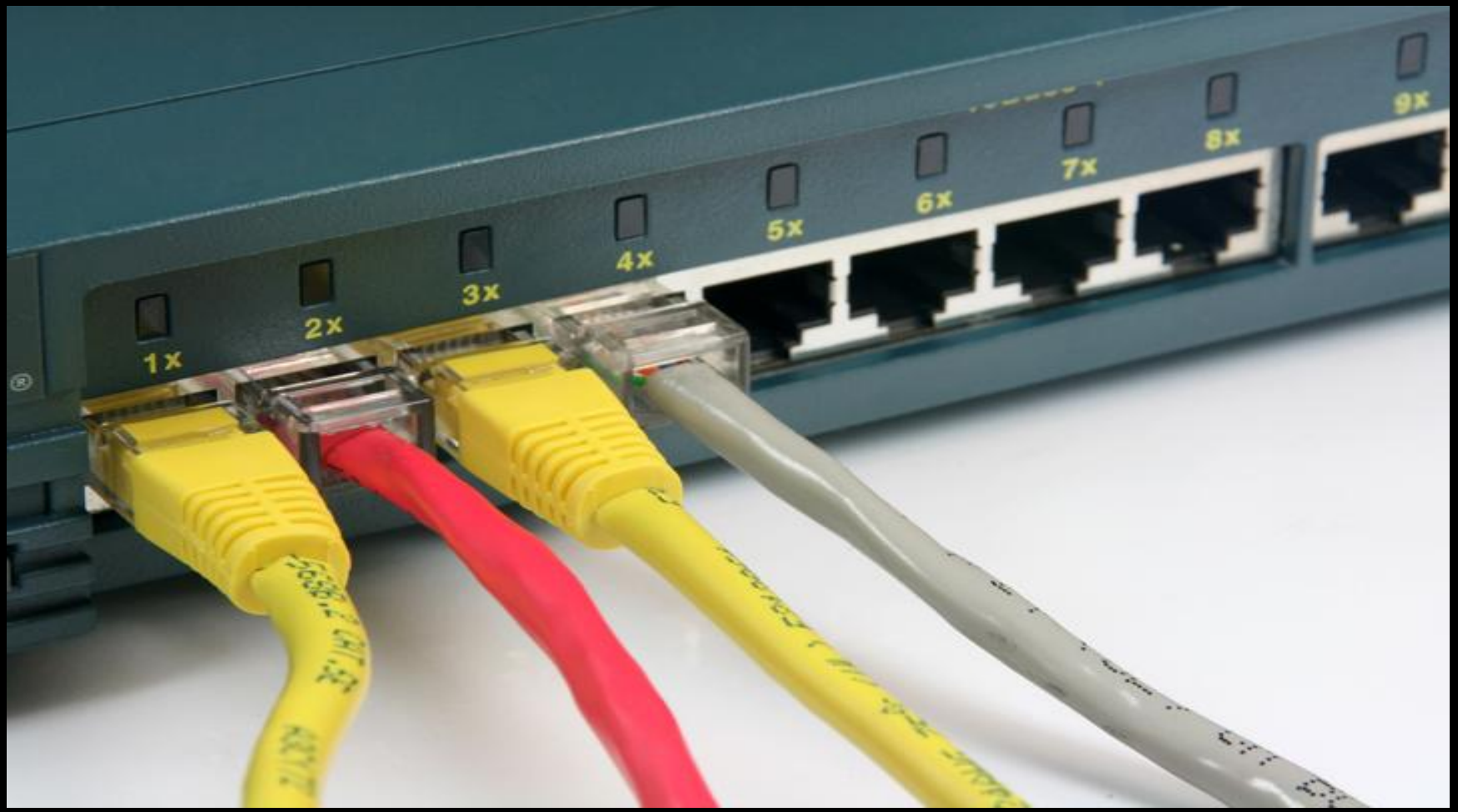
The Actors

The Solution

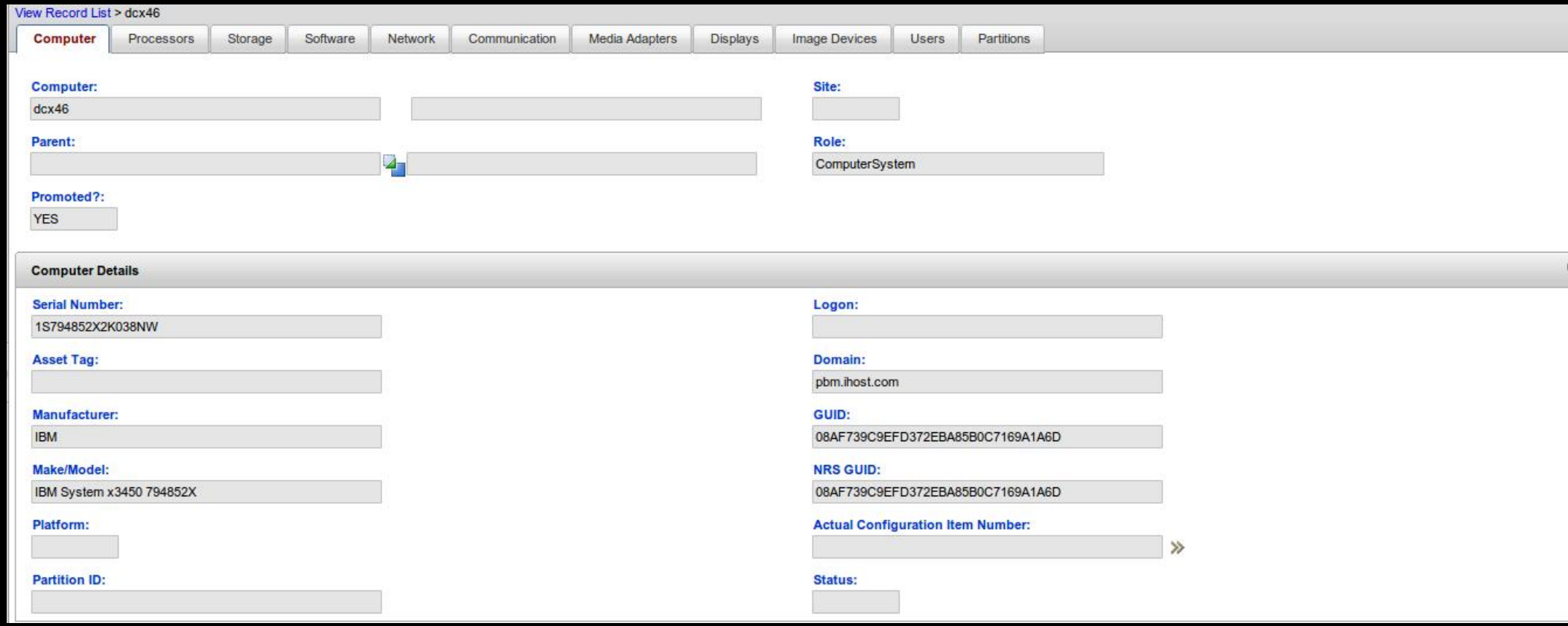
- Service request management
- Change, Configuration and Release Management
- IT asset lifecycle management
- Service catalog instance.
- Support for Service Providers



The Prototype

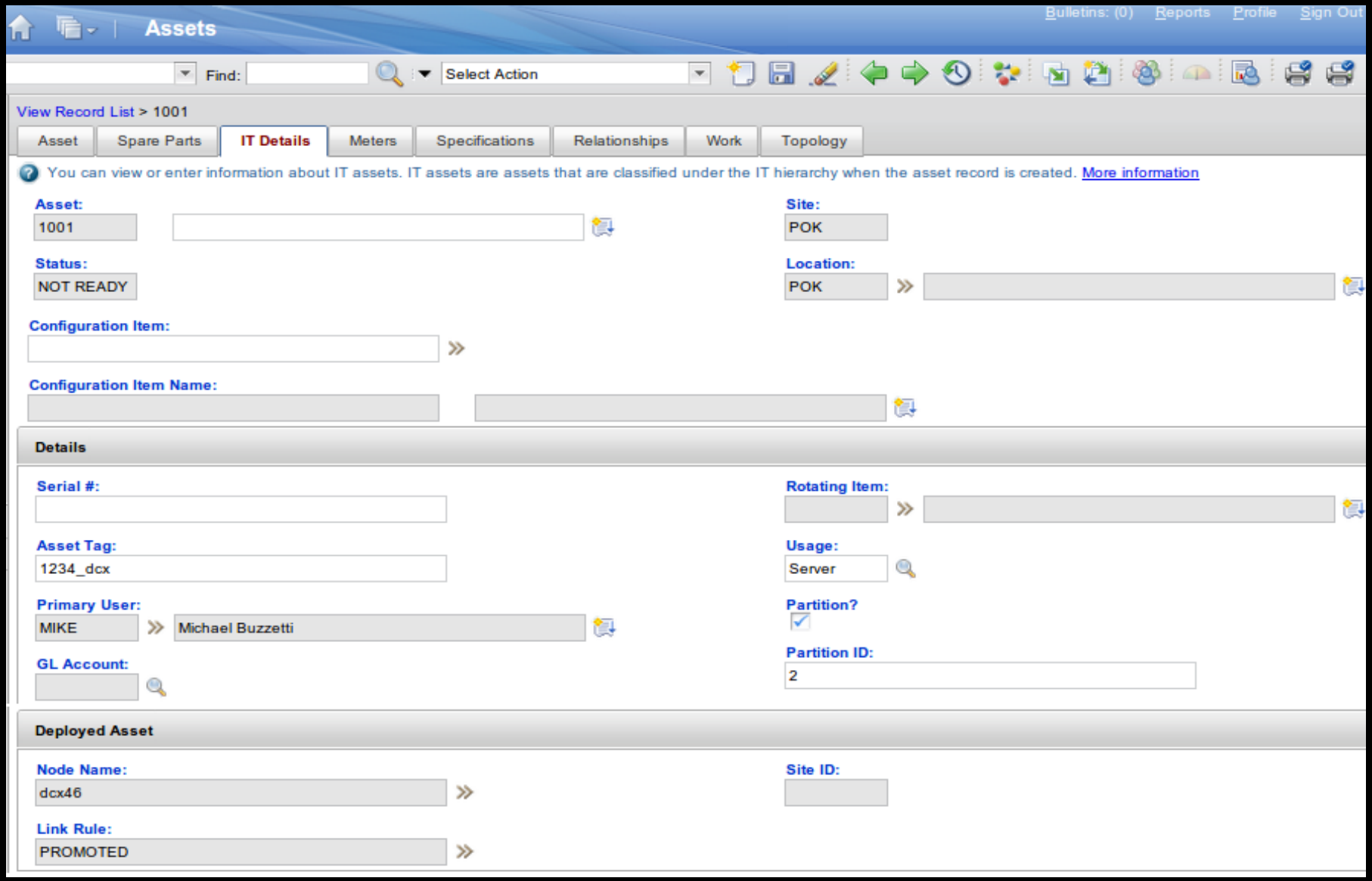


The Deployed Assets

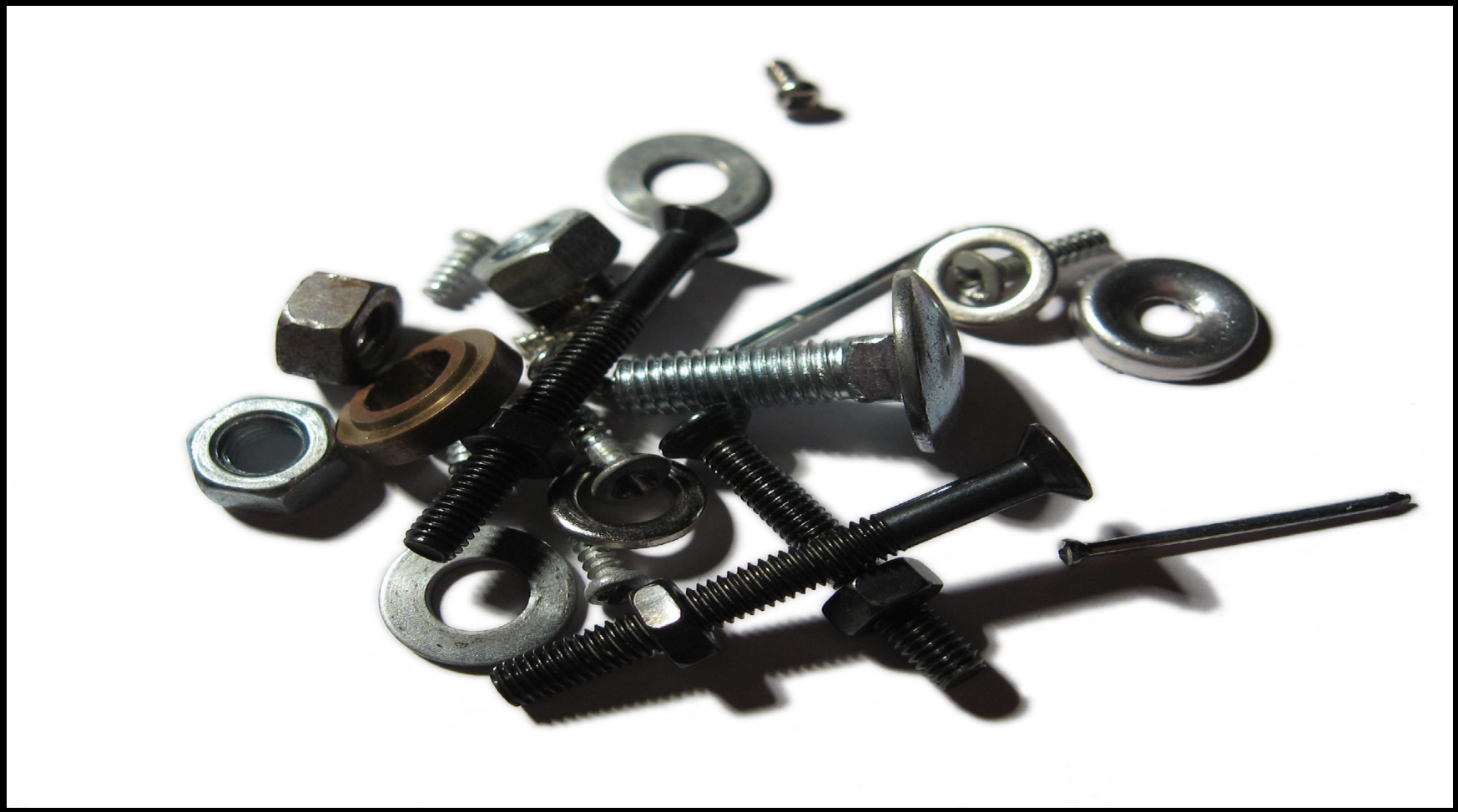


The Deployed Assets

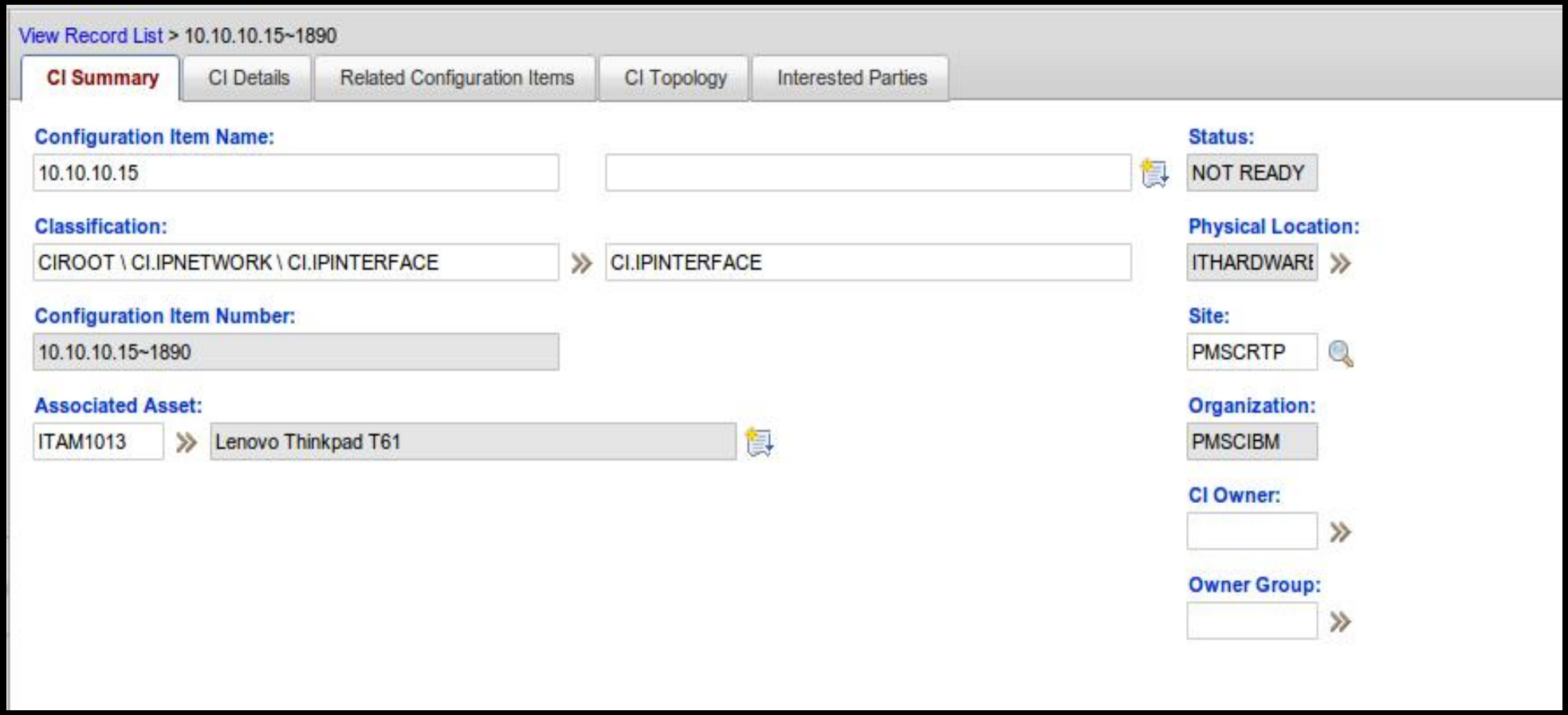
The Assets


Assets
Bulletins: (0)
Reports
Profile
Sign Out
Find:
Select Action
View Record List > 1001
Asset
Spare Parts
IT Details
Meters
Specifications
Relationships
Work
Topology
You can view or enter information about IT assets. IT assets are assets that are classified under the IT hierarchy when the asset record is created. More information
Asset:
1001
Site:
POK
Status:
NOT READY
Location:
POK
Configuration Item:
Configuration Item Name:
Details
Serial #:
Rotating Item:
Asset Tag:
1234_dcx
Usage:
Server
Primary User:
MIKE
Michael Buzzetti
Partition?
GL Account:
Partition ID:
2
Deployed Asset
Node Name:
dcx46
Site ID:
Link Rule:
PROMOTED

The Assets



The Configuration Items



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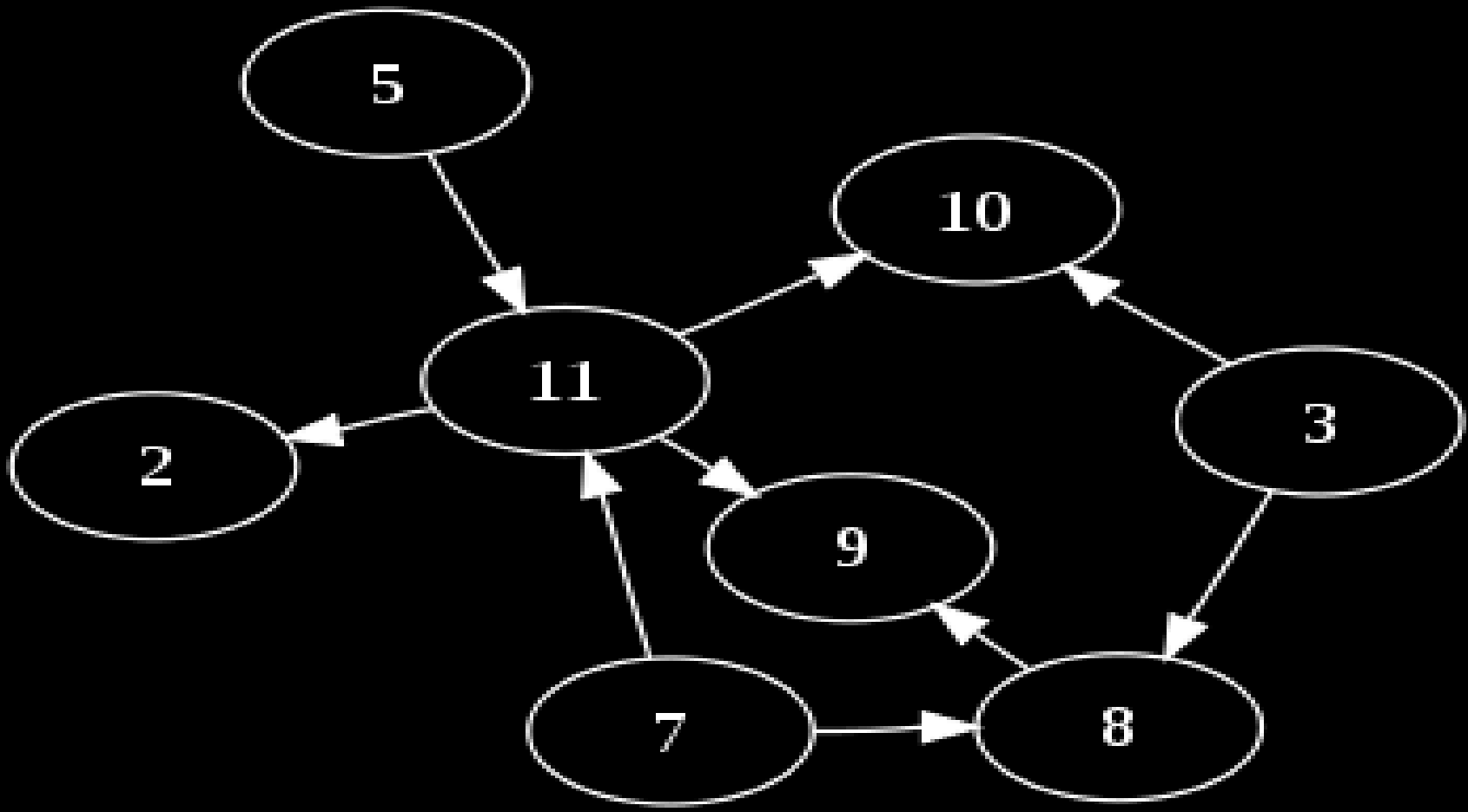
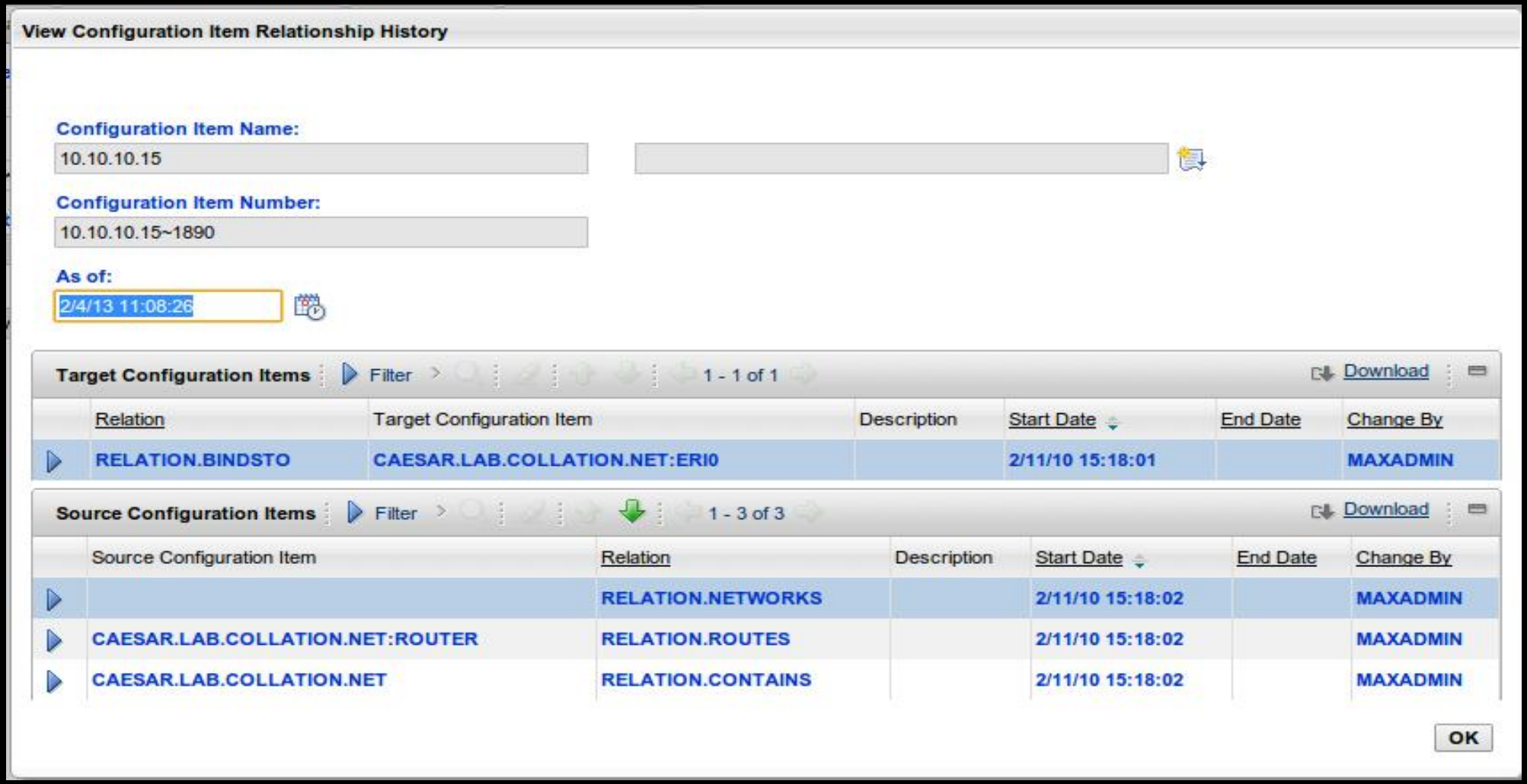


The Relationships



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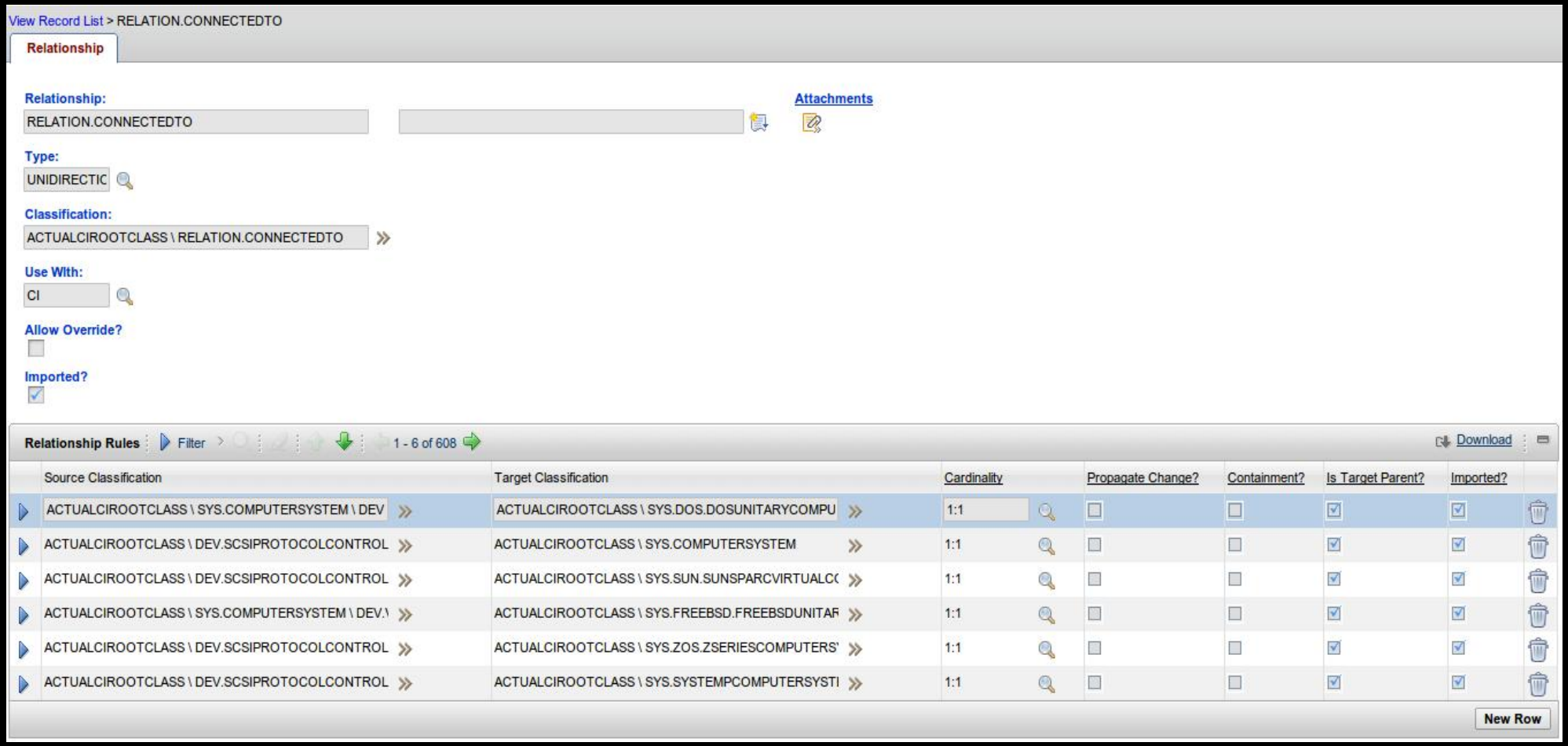
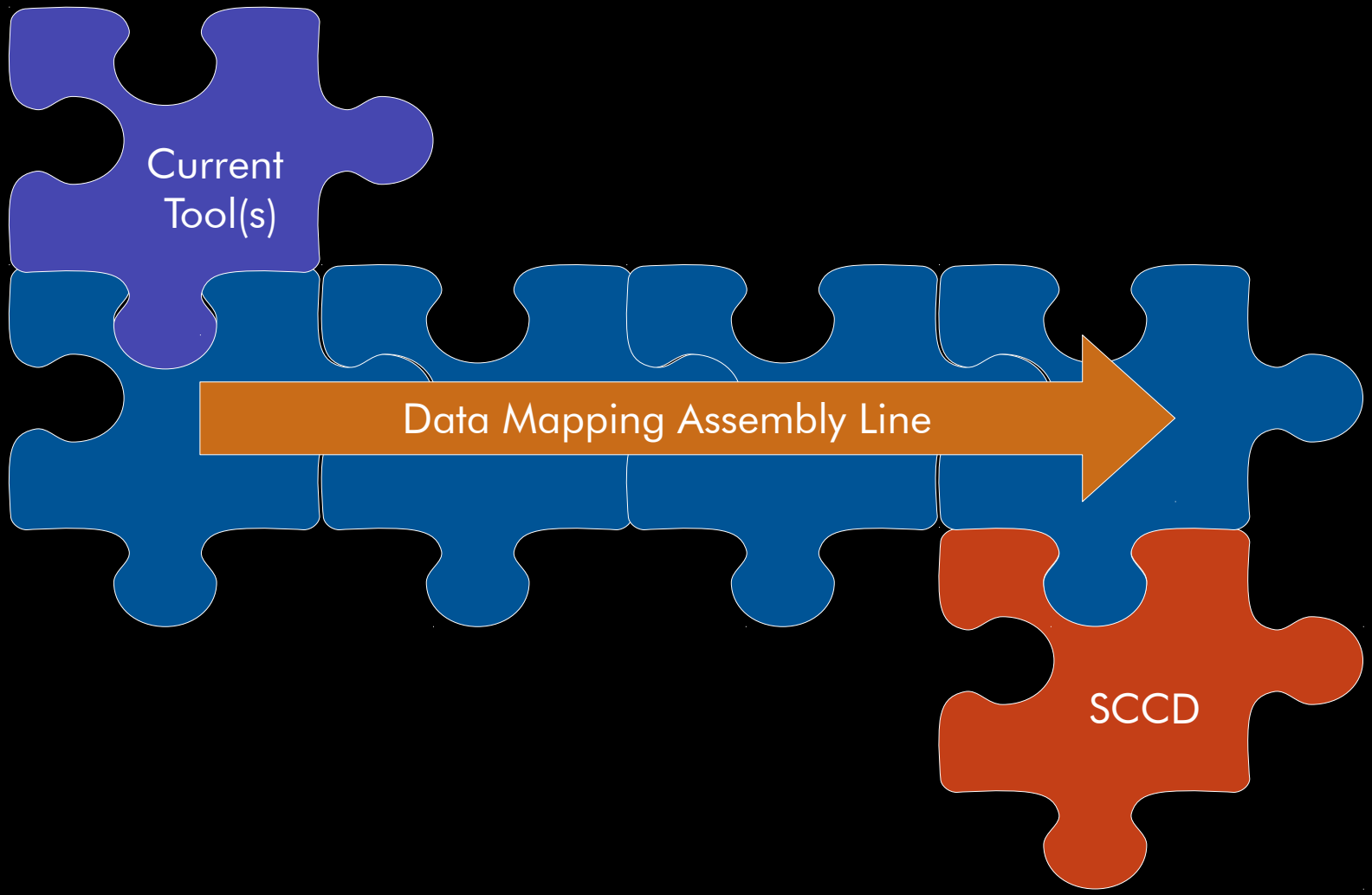
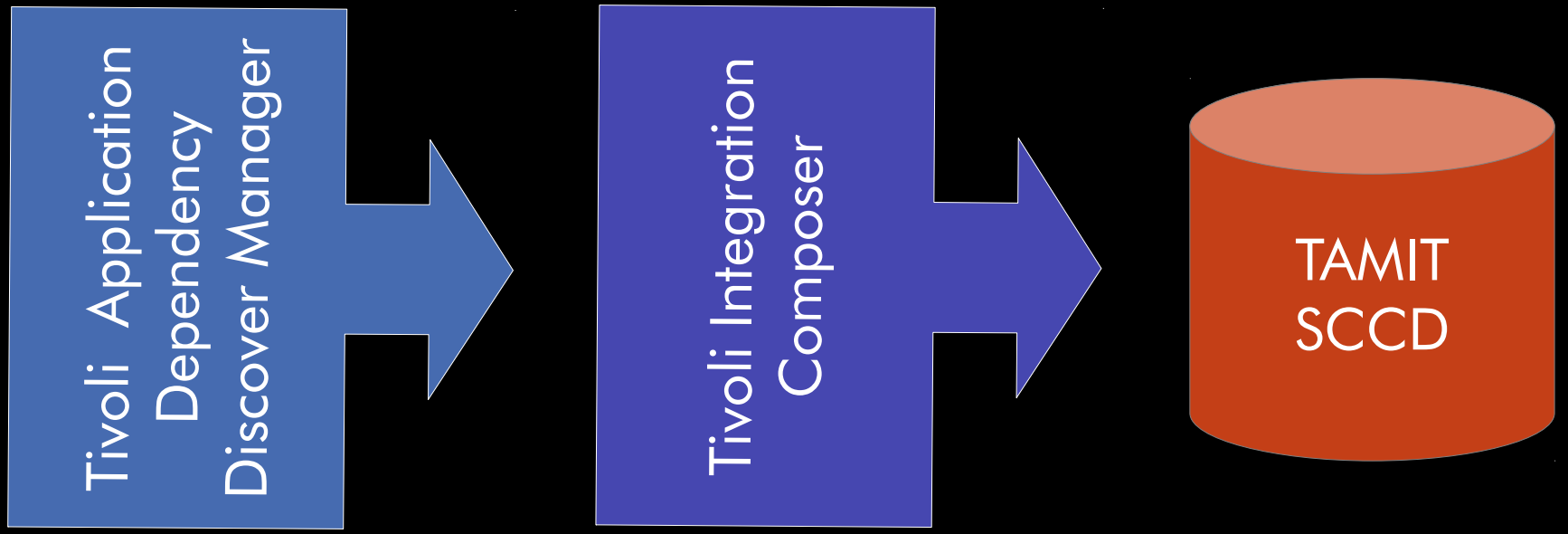


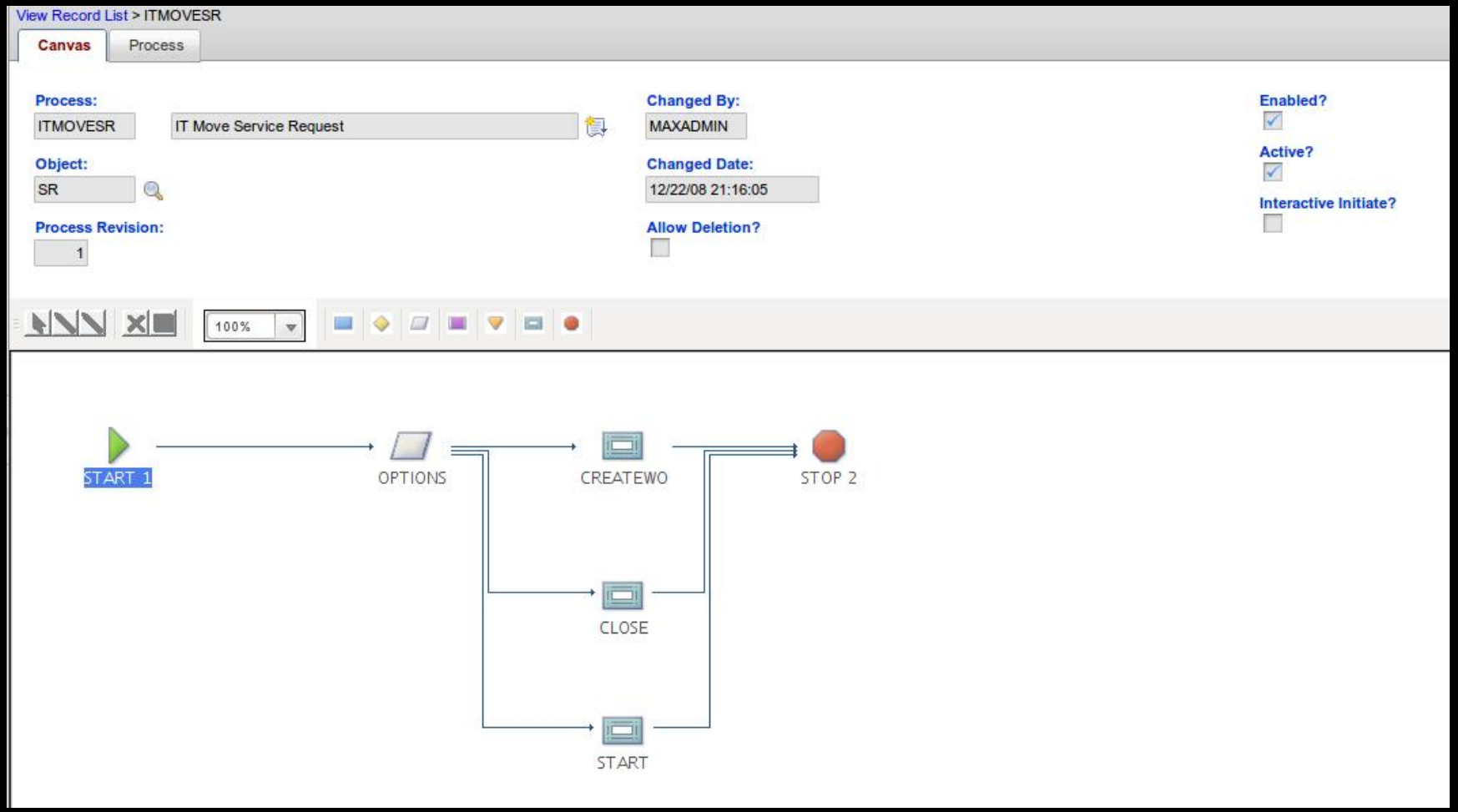
The Relationships



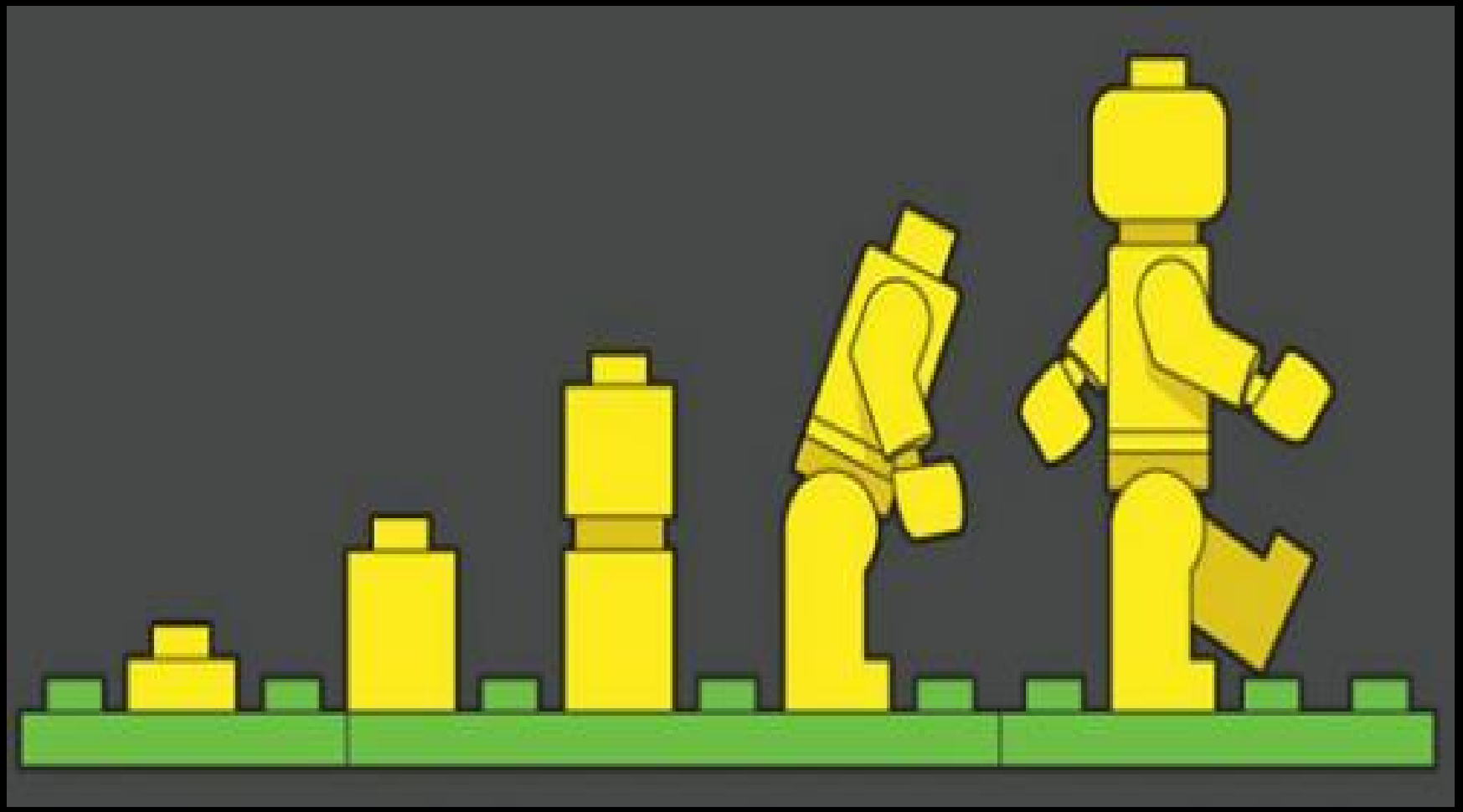
The Integration



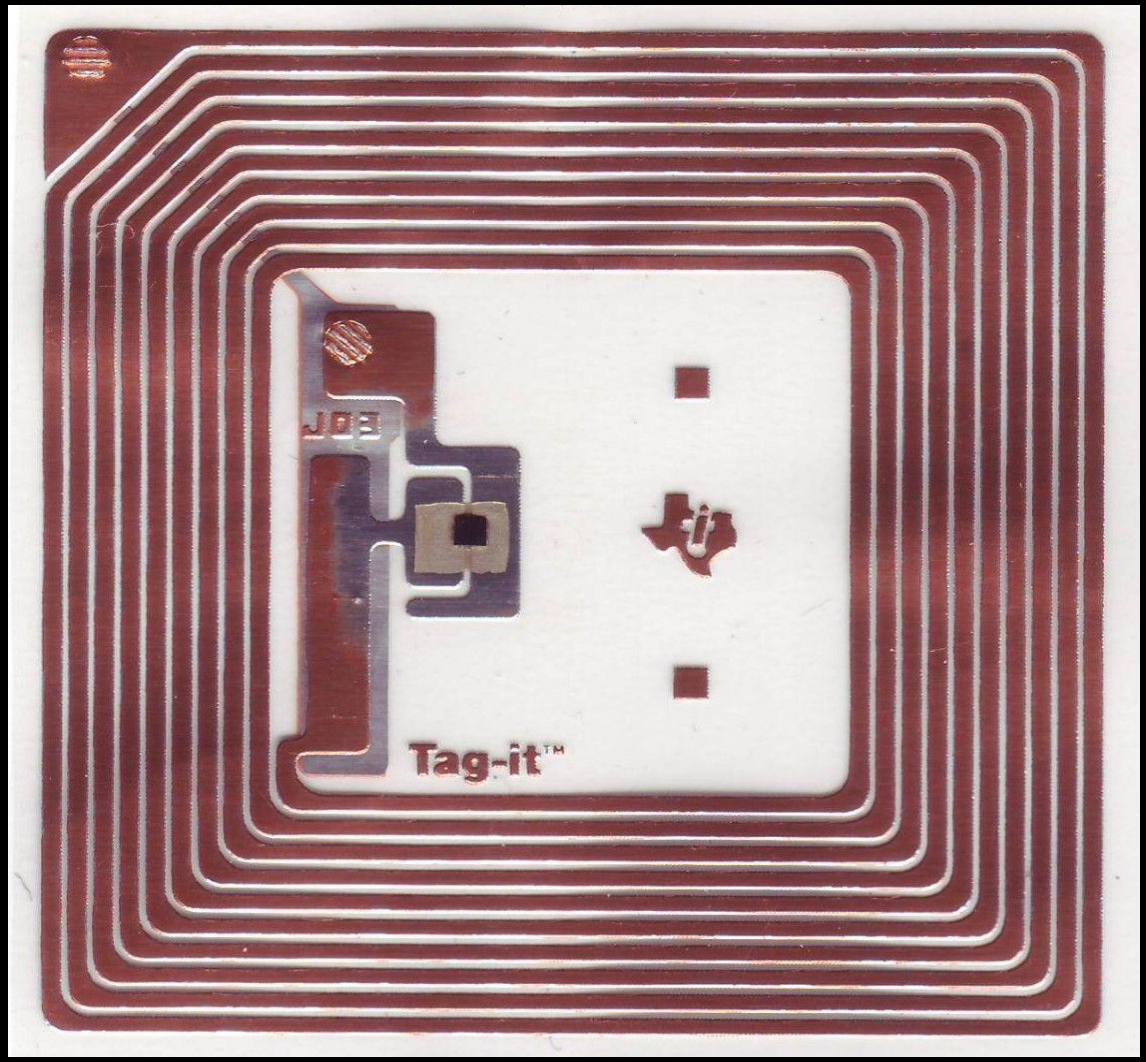
The Integration


View Record List > ITMOVESR
Canvas
Process
Process:
ITMOVESR
IT Move Service Request
Object:
SR
Process Revision:
1
Changed By:
MAXADMIN
Changed Date:
12/22/08 21:16:05
Allow Deletion?
Enabled?
Active?
Interactive Initiate?
100%
START 1
OPTIONS
CREATEWO
STOP 2
CLOSE
START

The Process



Other Evolutions



RFID

Barcodes

QR Codes

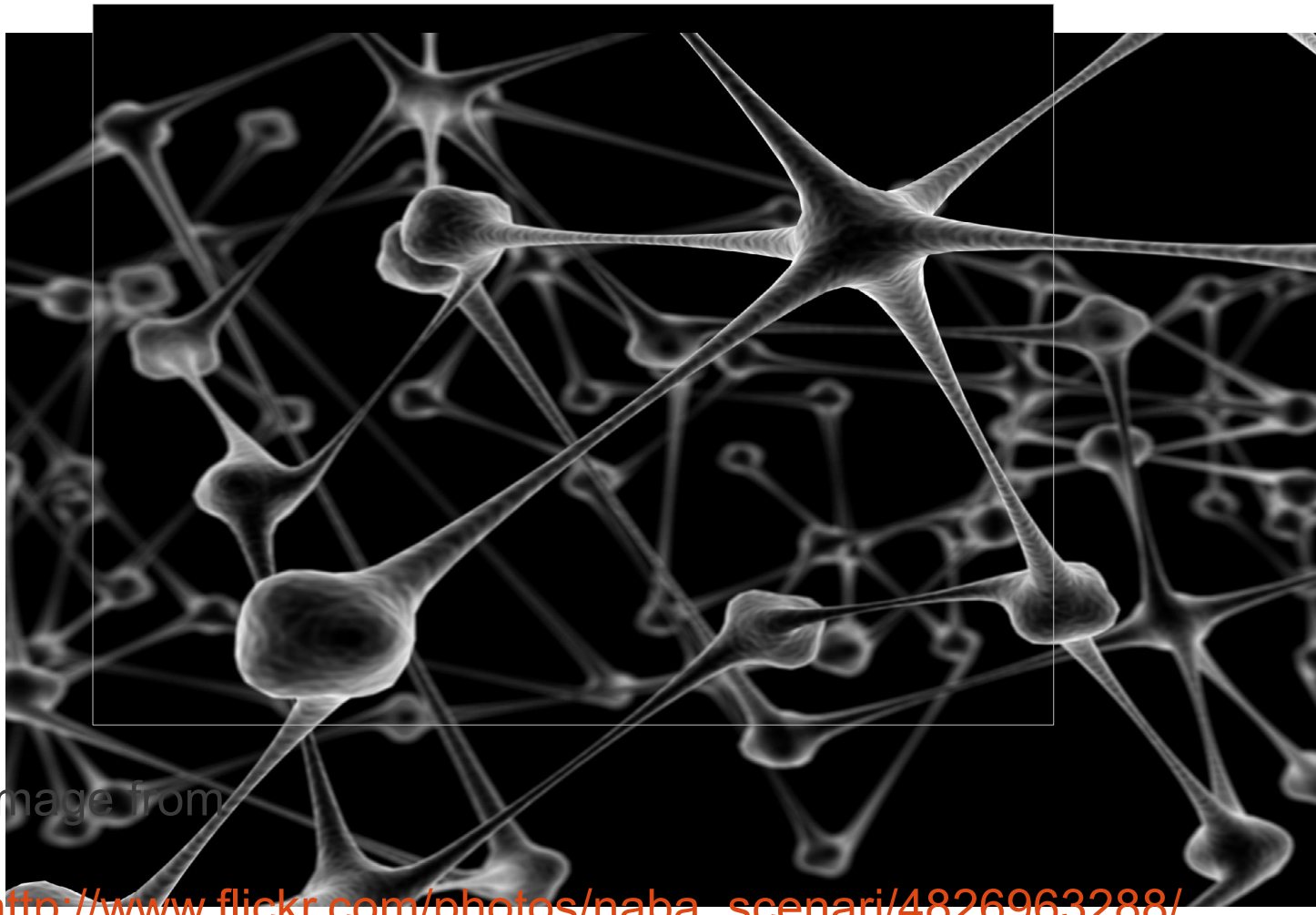
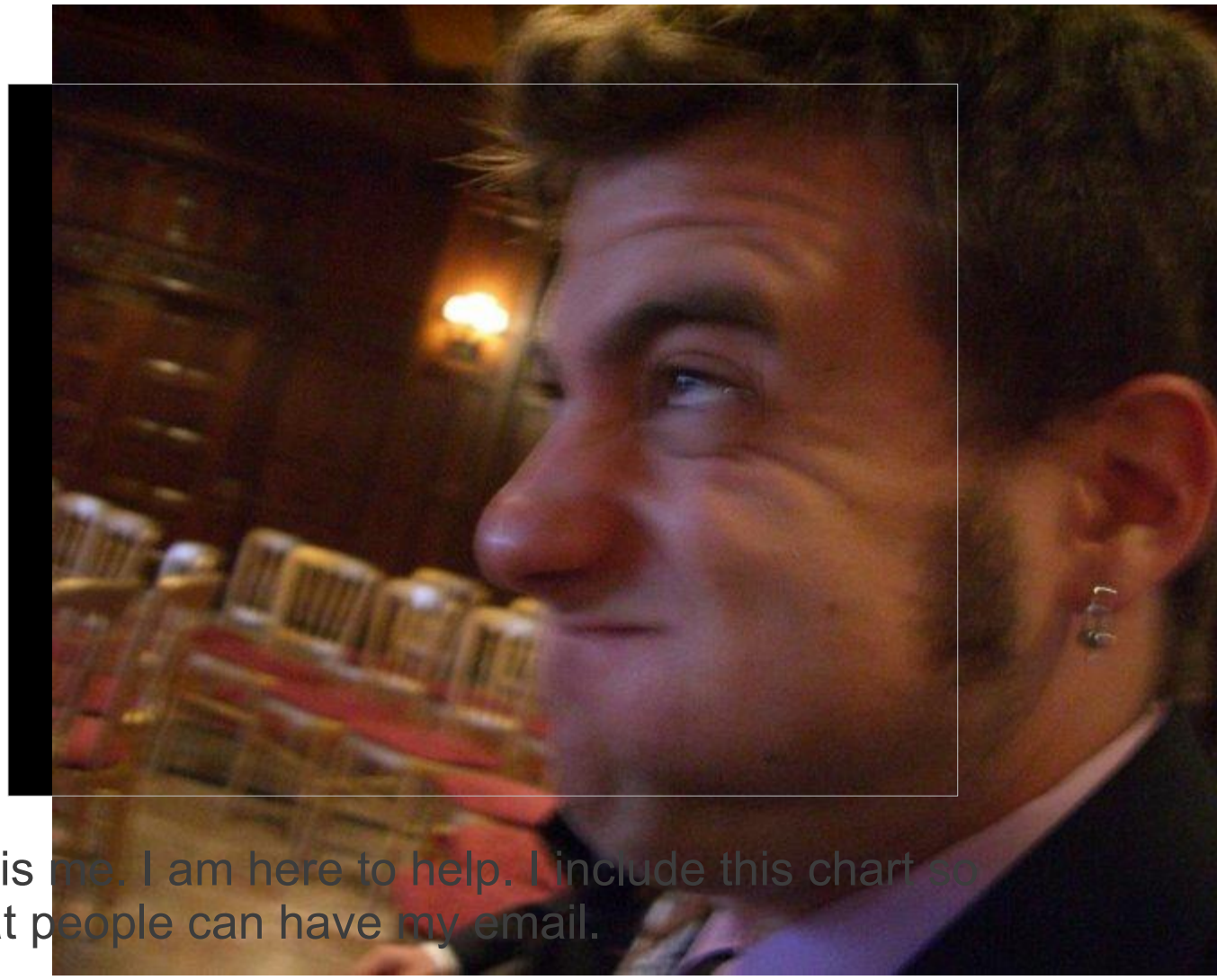


Image from

http://www.flickr.com/photos/naba_scenari/4826963288/

Based on experience with the IBM Benchmark center, this session will cover the issues with a dynamic environment's asset management process. Enterprise data centers must change their day-to-day process to meet the business demands. In this session we will walk through the process of one organization's attempt to achieve modernization, automation and service orientation of their datacenter and the services they support.



This is me. I am here to help. I include this chart so that people can have my email.

Although I might look young, I have been in the IT field for almost 15 years.

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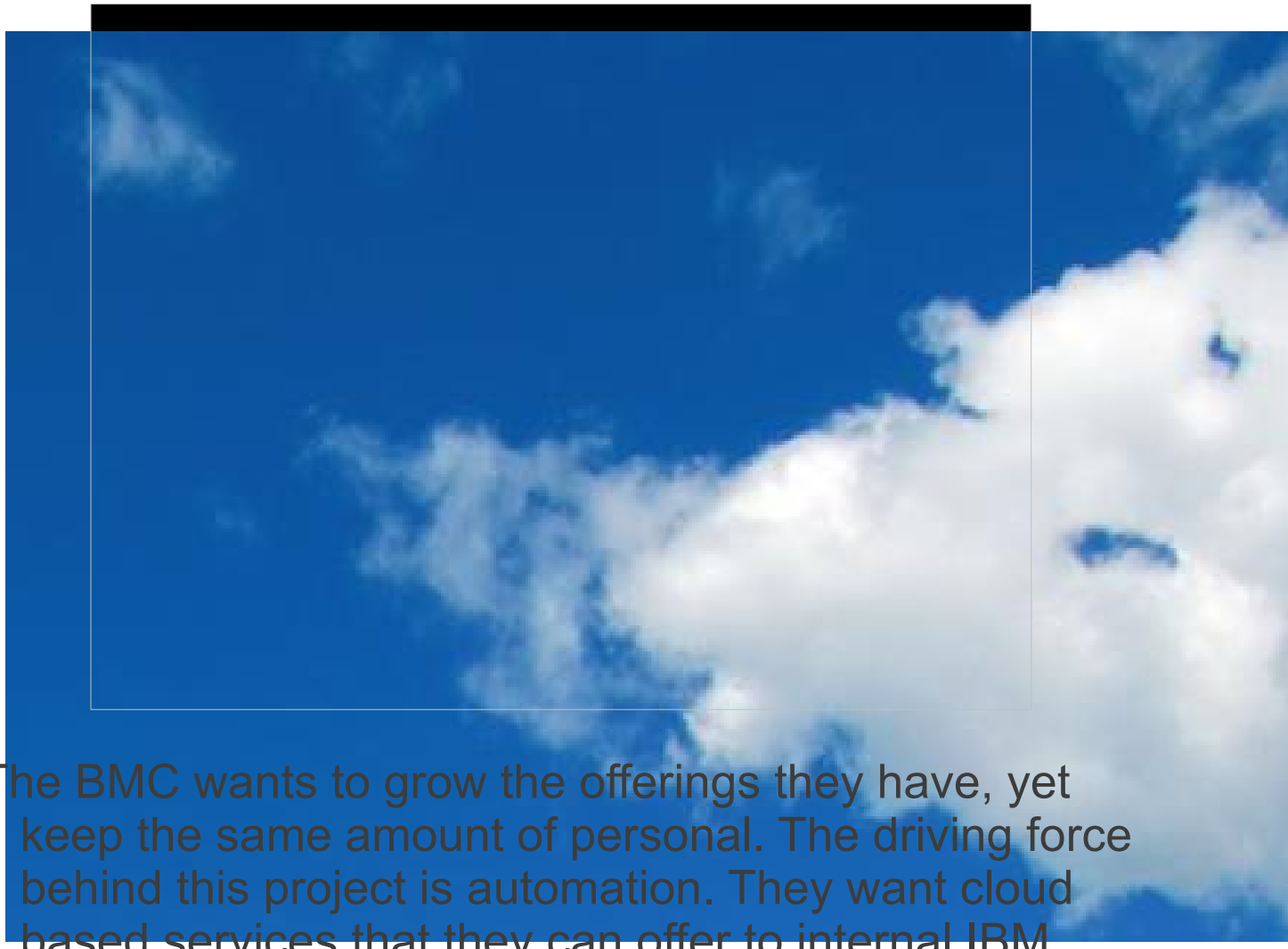
The Design Center

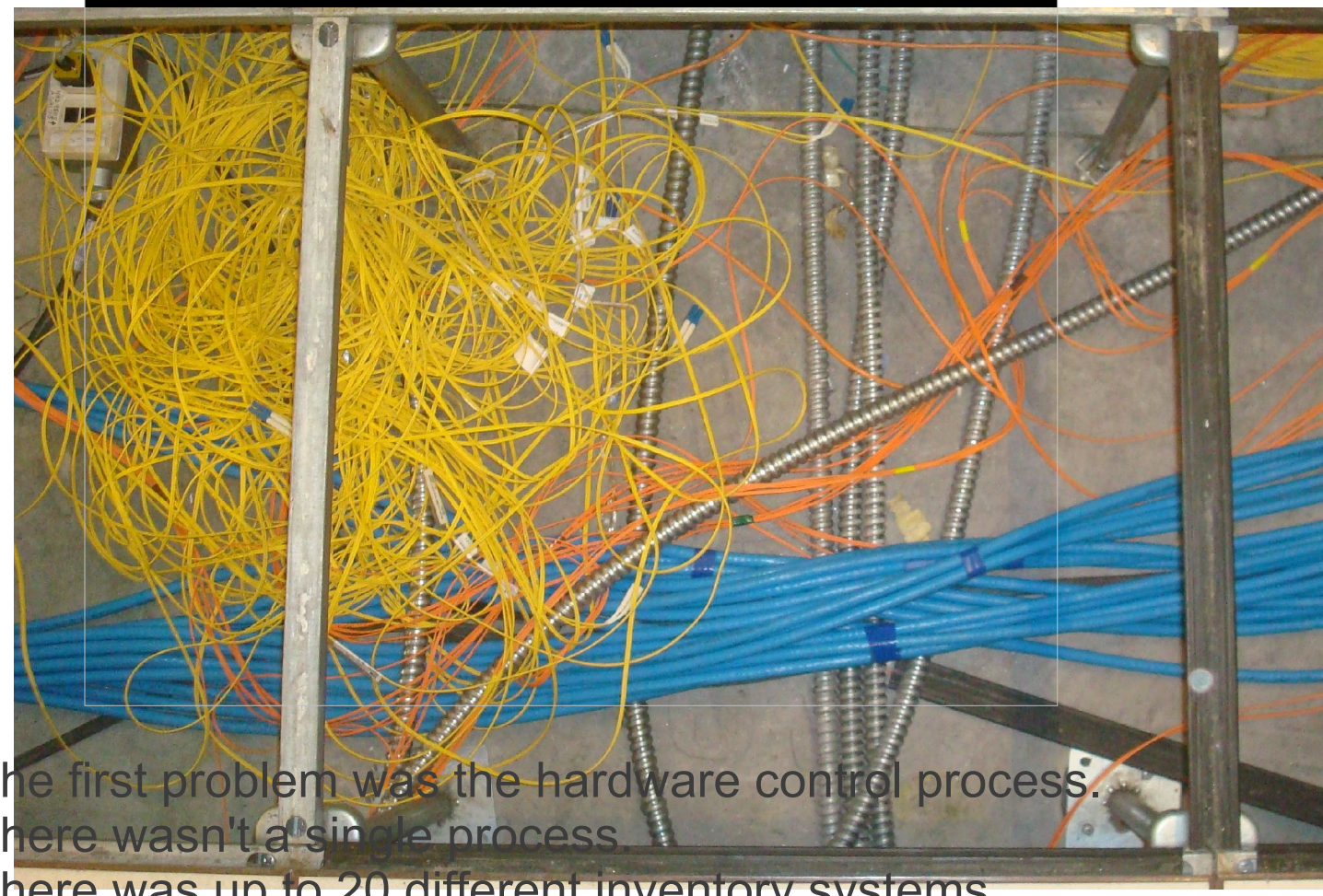
http://www-03.ibm.com/systems/services/designcenter/index.h

For the purposes of this presentation, the IBM Benchmark Centers will be the example business.
http://www-03.ibm.com/systems/services/benchmarkcenter/

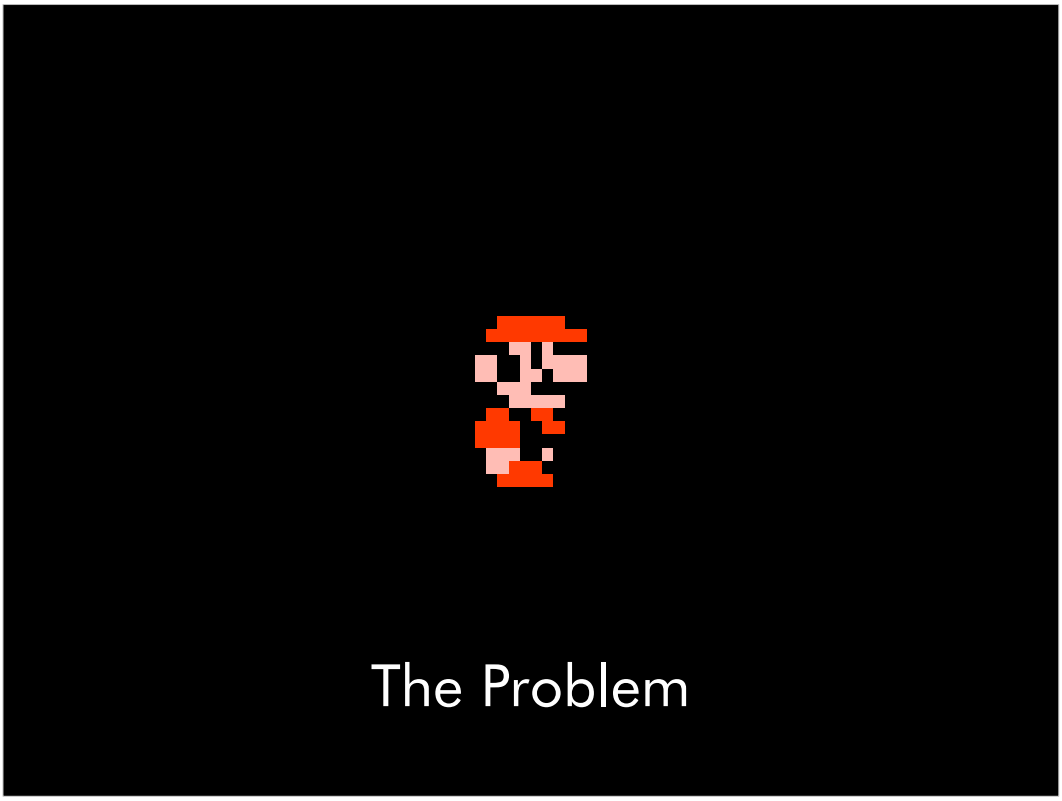
"IBM Benchmarking Centers provide access to IBM server technologies, including IBM System z®, IBM Power Systems for IBM AIX and Linux and System i, IBM System x, Blue Gene equipment and IBM storage devices. All IBM supported operating systems, including Linux and other IBM software, are also available."



The BMC wants to grow the offerings they have, yet keep the same amount of personal. The driving force behind this project is automation. They want cloud based services that they can offer to internal IBM clients as well as external clients.



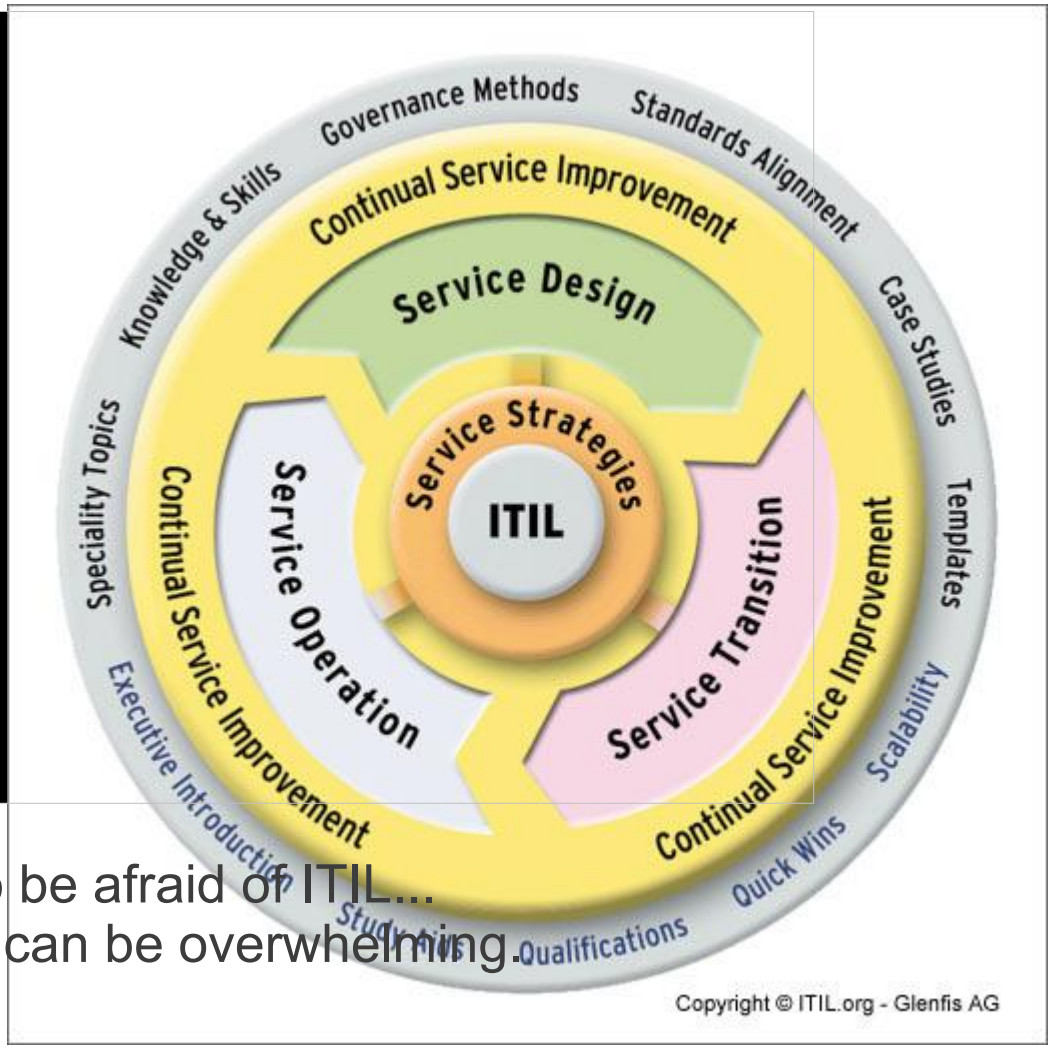
The first problem was the hardware control process.
There wasn't a single process.
There was up to 20 different inventory systems



The next issues was growth. Over the years, the BMC has grown and merged with all of STG's product lines.

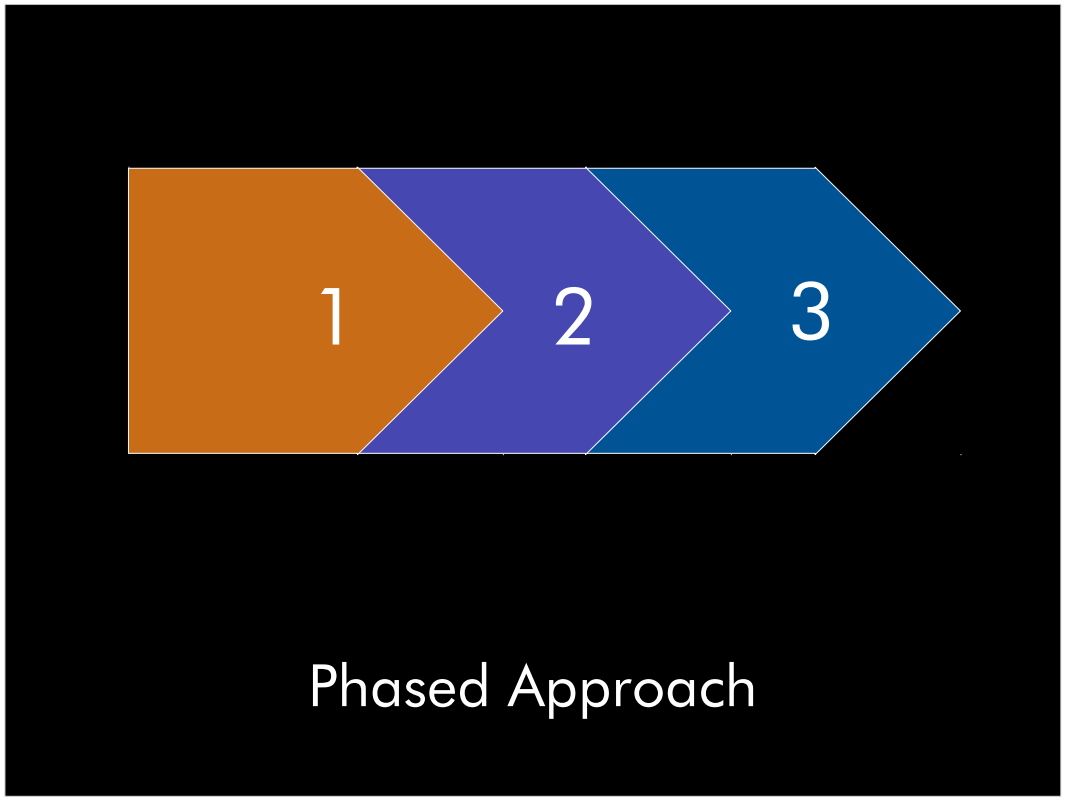
This made things difficult, because like many organizations, the workload increased, but the personal didn't.

Image from
http://www.sxc.hu/photo/1391608/?forcedownload=1

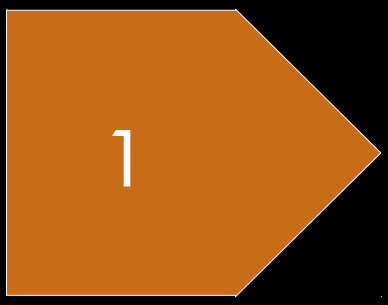


People seem to be afraid of ITIL...
It is complex. It can be overwhelming.

T[illegible] simple. We need to invest in a proper inventory tool.



Each phase would build on a single architecture
They would be completed in sequence
They would build off one another
They have semi-independent goals so there is gain at the end of each phase
The architecture would evolve as each phase progressed



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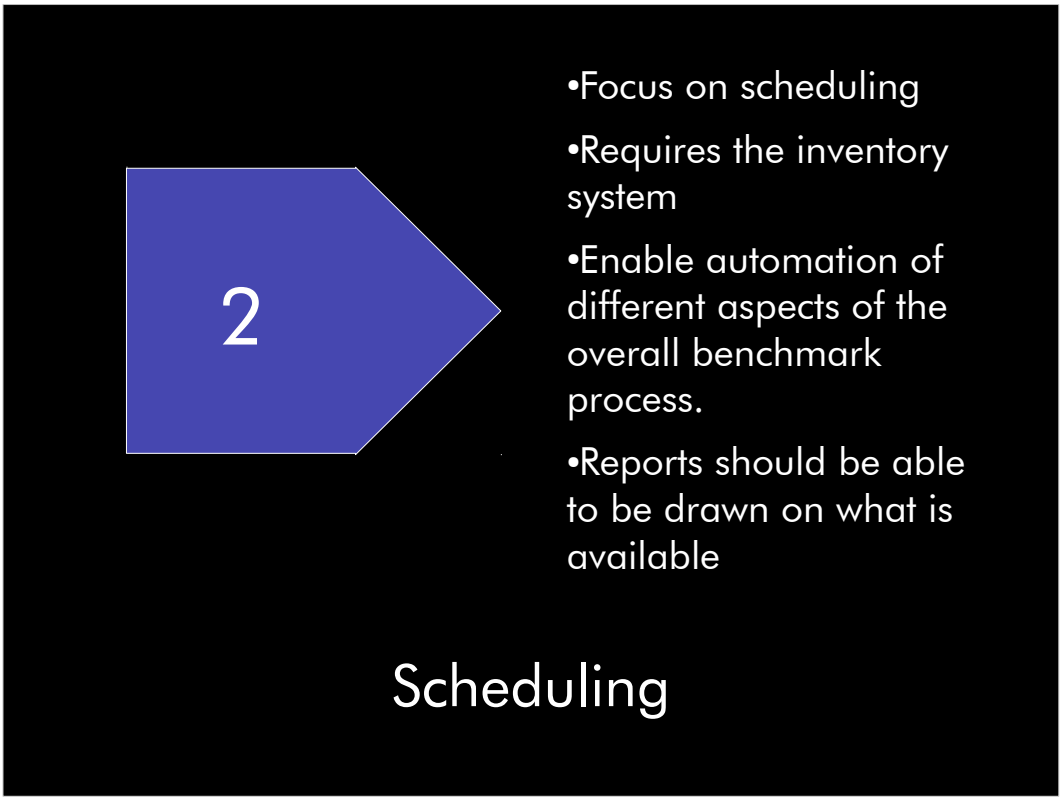
2
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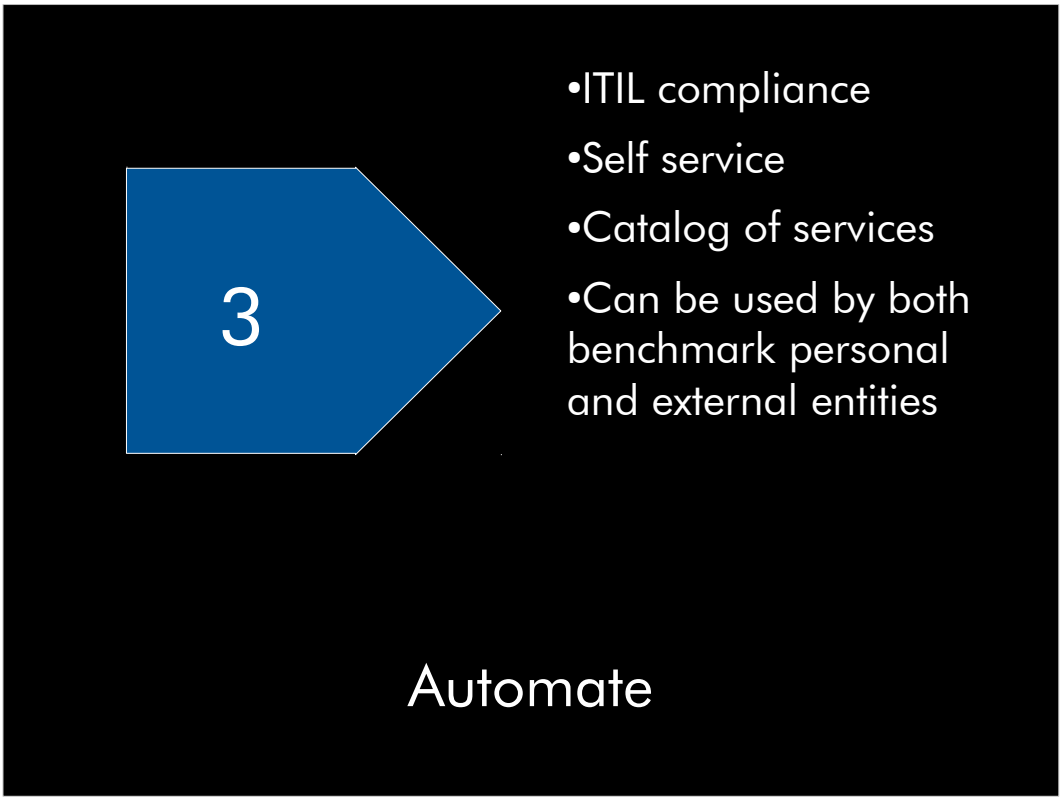
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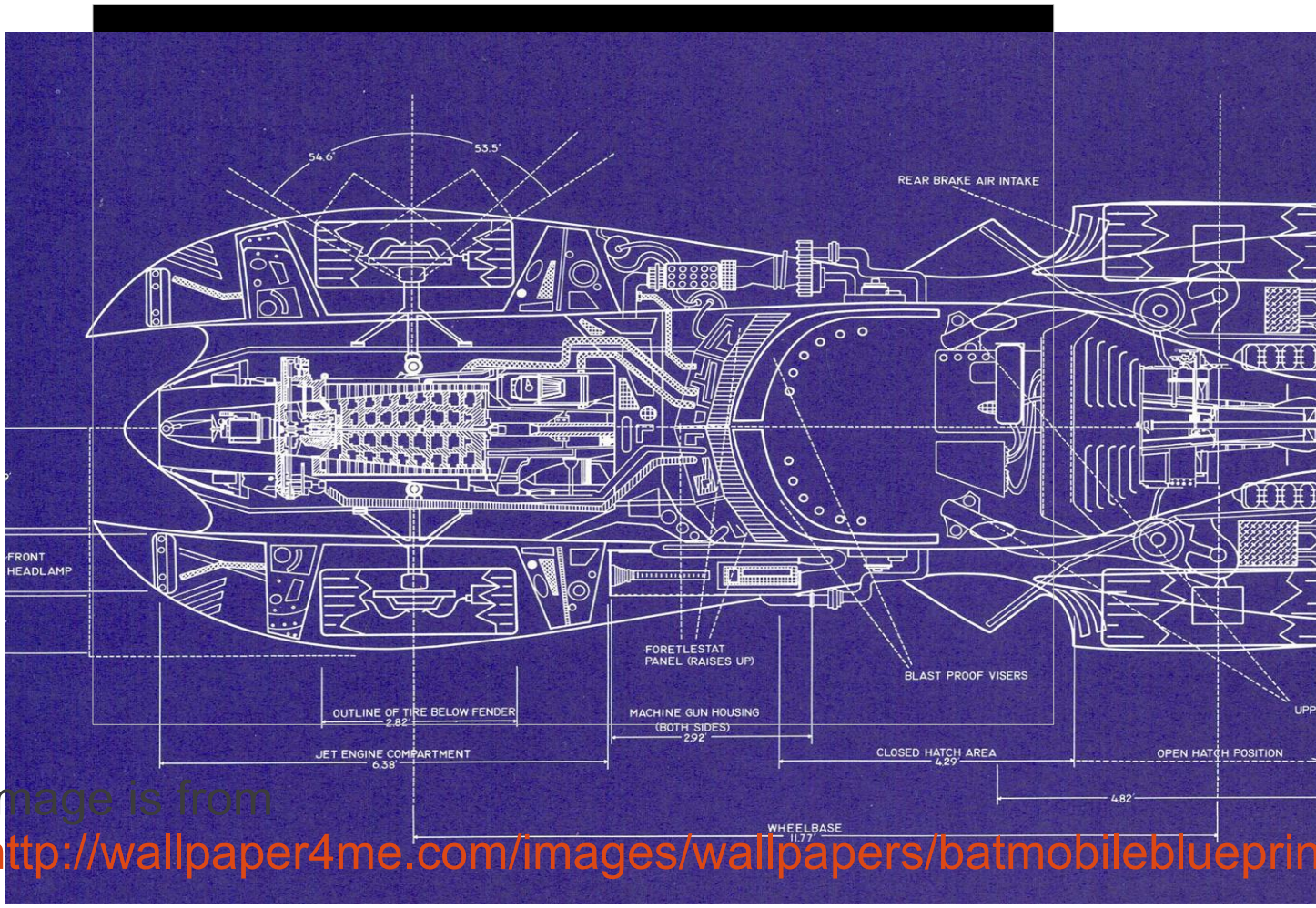
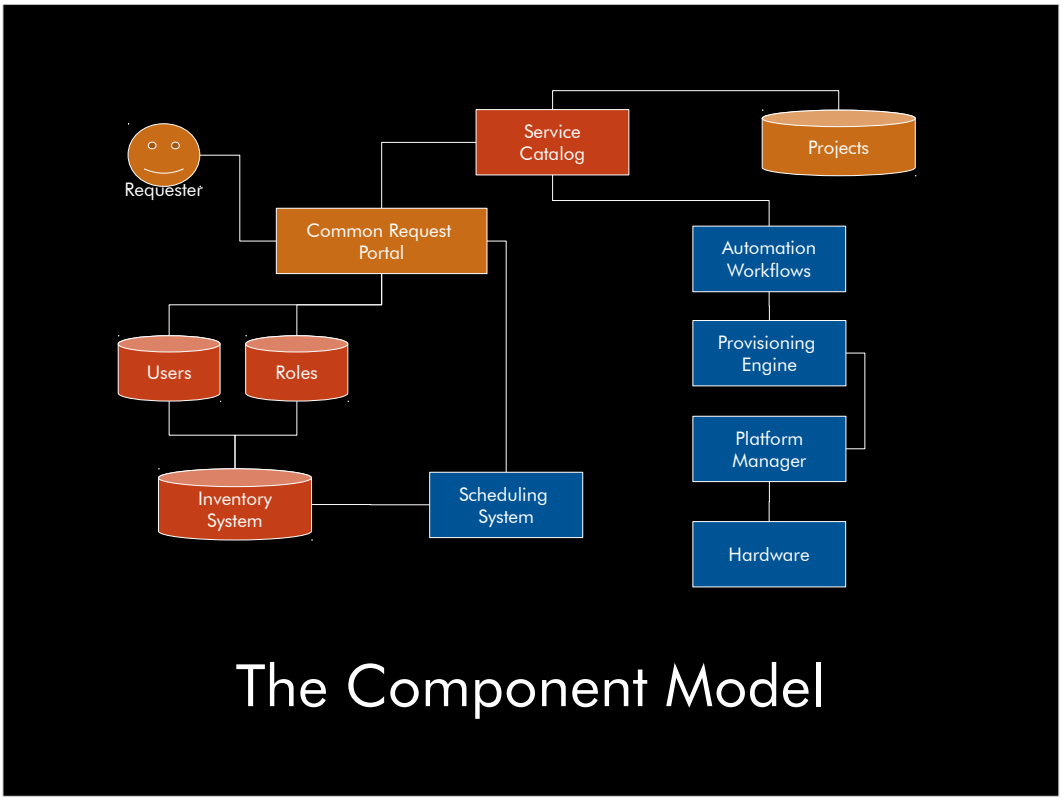


Image is from http://wallpaper4me.com/images/wallpapers/batmobileblueprin

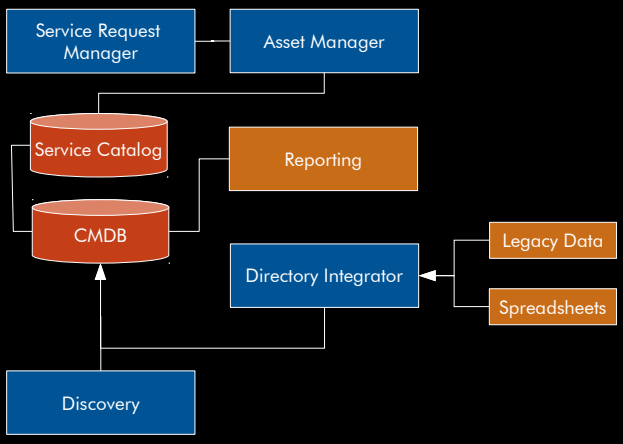
It is important to understand how all the pieces are going to fit when building any complicated infrastructure. Since our group is so diverse, we spend months gathering data. It takes a long time to gather the appropriate requirements, define the component model and map that to a solution.



Not Part of Phase One

Product

Currently Exists



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...	...

The Use Cases

Usecase overview	The Requester requests to have a machine moved from one building to another
Actor(s)	Service Requester, Inventory Manager
Success	The machine is moved and the inventory system is updated
Failure	The machine is note moved or the inventory system is not updated

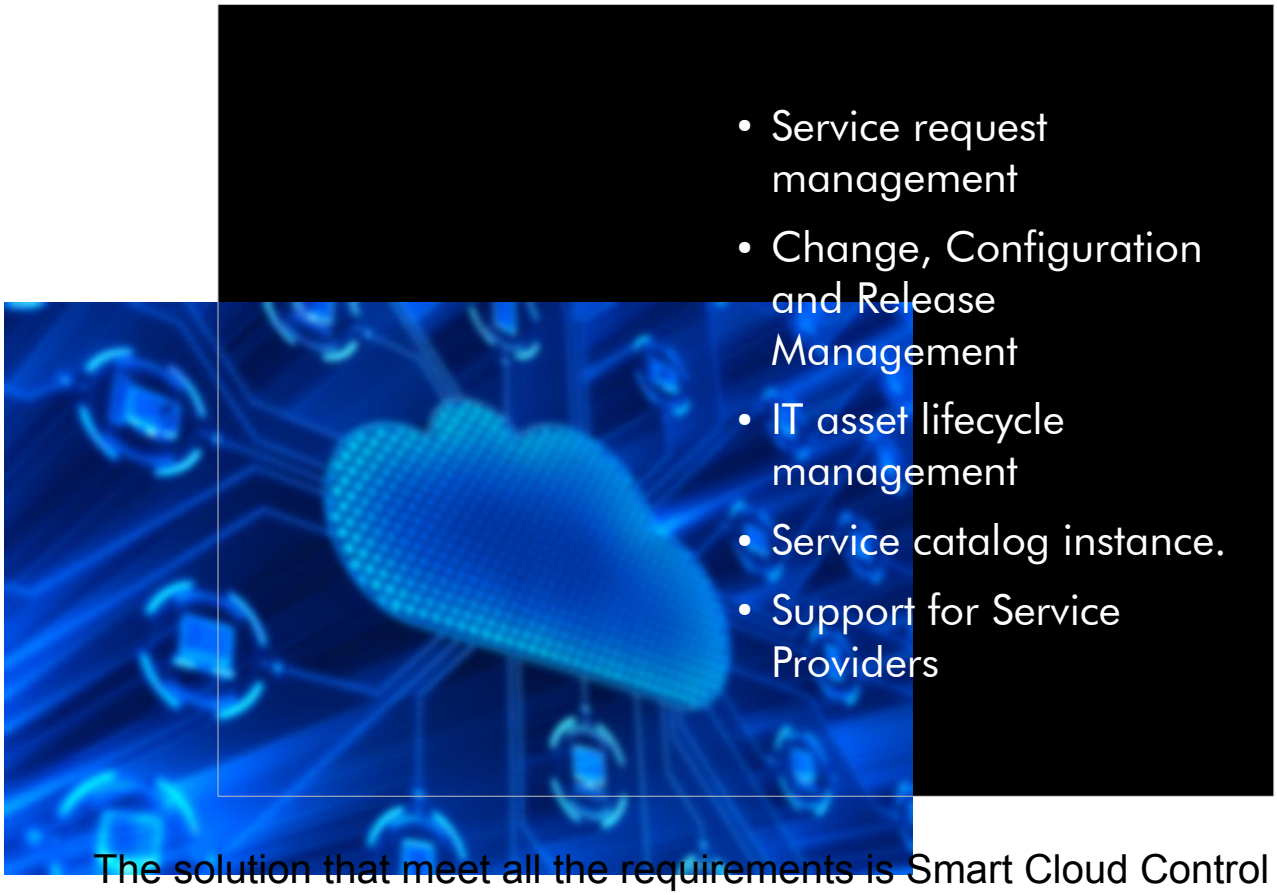
UC-001

Step	Actor	System
1	Requester connects to the Common Request Portal.	
2		Common Request Portal displays the Service Catalog that the actor can select from based on the access permissions.
3	Requester requests the machine locate service and enters in the appropriate information required by the service.	
4		The Common Request Portal routes the request to the Request Resource Approver.
5	The Request Resource Approver approves the request.	The Projects systems creates a work order based on the request.
6	The Hardware Administrator is notified of the request and is set the required information.	
7	The Hardware Administrator moves the machine, and updates the work item.	The closer of the work item is noted as a change record in the Inventory System.
8	The Inventory Manager is notified of the change record and ensures that the inventory system displays the correct information.	This could also initiate a network change work request, not detailed here.
9	The request is completed, the work item is closed, and the requester is notified.	

UC-001

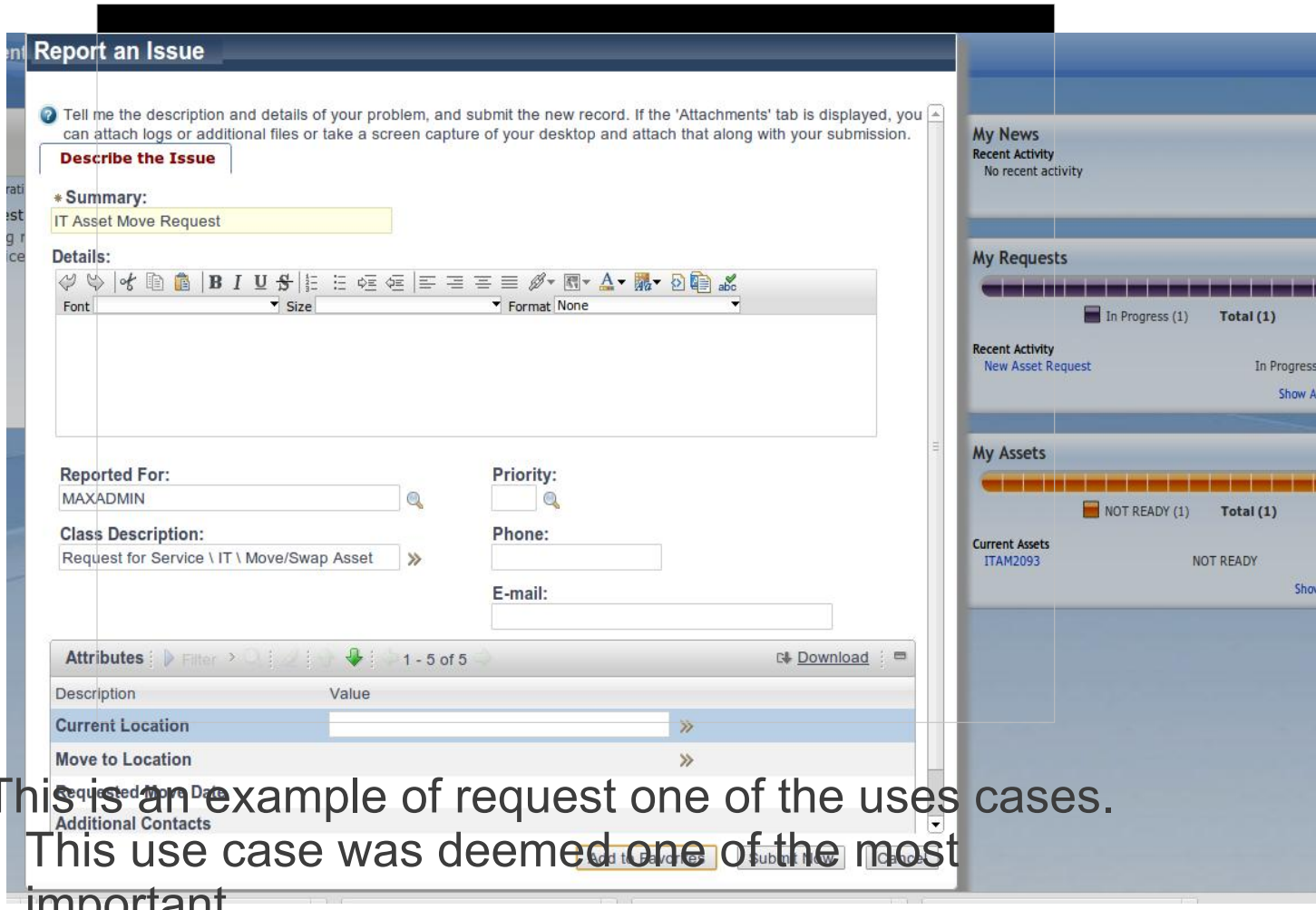
Name	Description
Request Qualifier	Determines whether an engagement is accepted based on revenue and resource availability
Hardware Administr	Assembles and racks systems; also connects electrical power
Build Administrator	Builds everything up to the operating system
Resource Approver	Approve resource request.
Requester	Requests engagement.
Network Administrat	DNS, Switches, IP allocation, VPN.
Storage Administrat	Configures the storage zones and volumes.
Inventory Managem	Ensures that hardware is properly entered in the inventory system. Also manages sending and receiving physical assets.
System Architect	Defines the resource configuration and works with Procurement Admin to ensure proper assets are ordered
Asset Owner	Ensures that the assets are in the inventory tool correctly.
Service Administrato	Defines services; updates the common request portal

The Actors



The solution that meet all the requirements is Smart Cloud Control Desk
http://www-142.ibm.com/software/products/us/en/smartcloudcontroldesk/

- Service request management gives you an efficient service desk for handling service requests and managing incidents.
- Change, configuration and release management provides advanced impact analysis and automated change procedures designed to reduce risk and support integrity of services.
- IT asset lifecycle management provides inventory management and software license compliance capabilities. Helps to manage assets throughout their lifecycle, optimizing usage of digital and physical assets and minimizing compliance risks.
- Service catalog helps users solve their own problems. Provides an intuitive self-help portal and a complete catalog of services.
- Support for service providers supply service support and service delivery capabilities for multiple customers in a single deployed instance. This can help increase profitability and improve customer satisfaction.



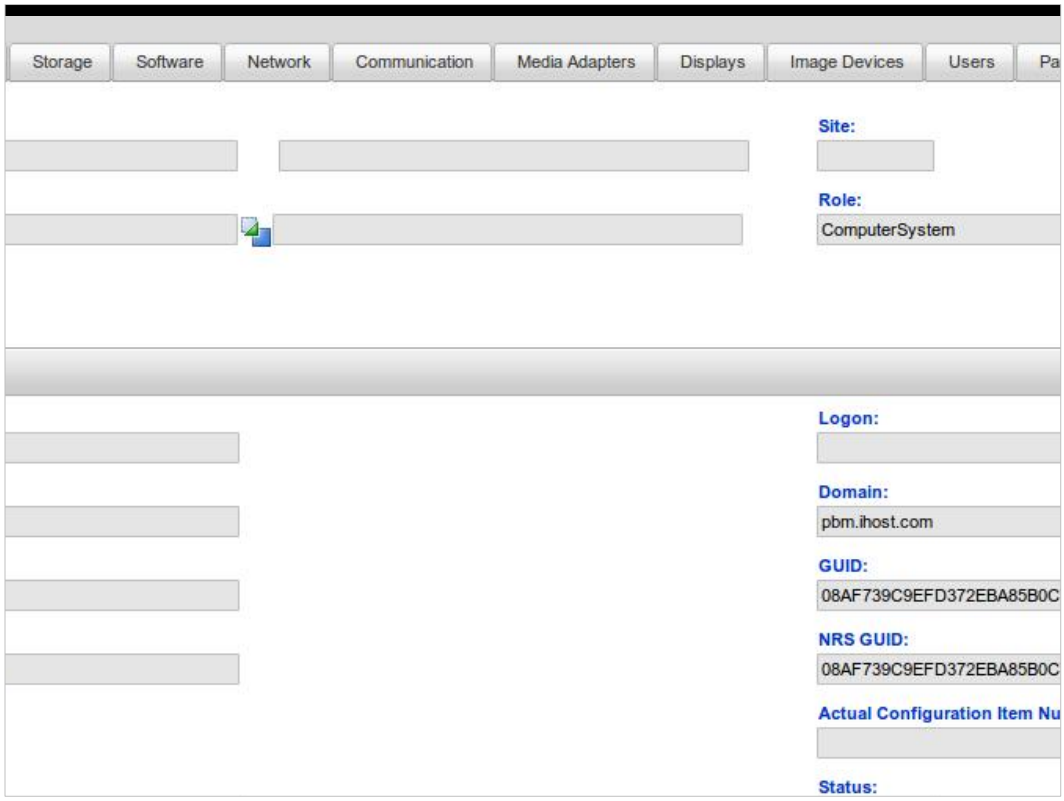
This is an example of request one of the uses cases. This use case was deemed one of the most important.

Since SCCD comes with deployed asset hooks, we start there.

There are 4 types of deployed assets

- Computers
- Network Devices
- Network Printers
- Software
-

This makes sense. We are taking about deployed IT assets that are already deployed. The only way to automatically find this is if they are connected to a network.

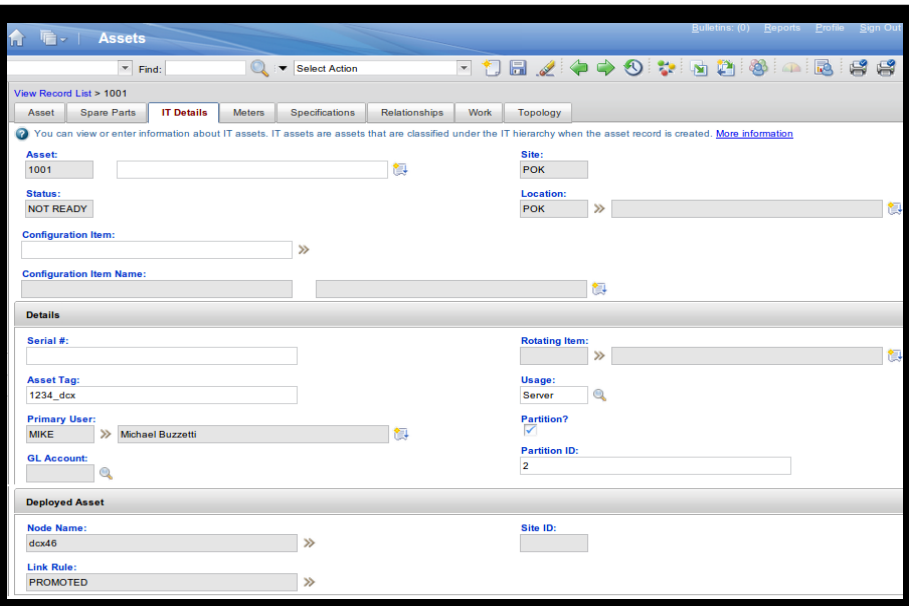


Example deployed assets that was imported.

Image From
http://www.zdnet.com/cool-runnings-ibms-recipe-for-a-happy-d

DPA can be promoted to assets, based on rules that you define.

The term asset is very very vague. It is pretty much anything, a chair, a computer, a CPU, a light. You need to define what assets are under your control.


Assets
Bulletins: (0)
Reports
Profile
Sign Out
Find:
Select Action
View Record List > 1001
Asset
Spare Parts
IT Details
Meters
Specifications
Relationships
Work
Topology
You can view or enter information about IT assets. IT assets are assets that are classified under the IT hierarchy when the asset record is created. More information
Asset:
1001
Site:
POK
Status:
NOT READY
Location:
POK
Configuration Item:
Configuration Item Name:
Details
Serial #:
Rotating Item:
Asset Tag:
1234_dcx
Usage:
Server
Primary User:
MIKE
Michael Buzzetti
Partition?
GL Account:
Partition ID:
2
Deployed Asset
Node Name:
dcx46
Site ID:
Link Rule:
PROMOTED

The Assets

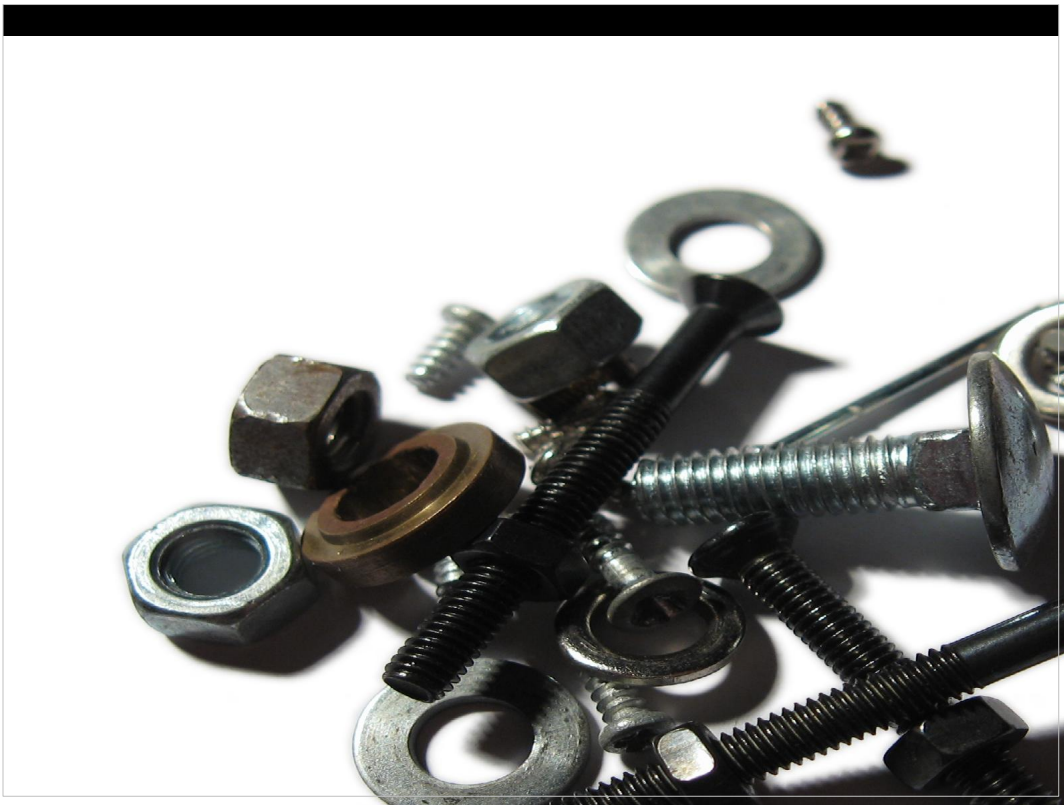
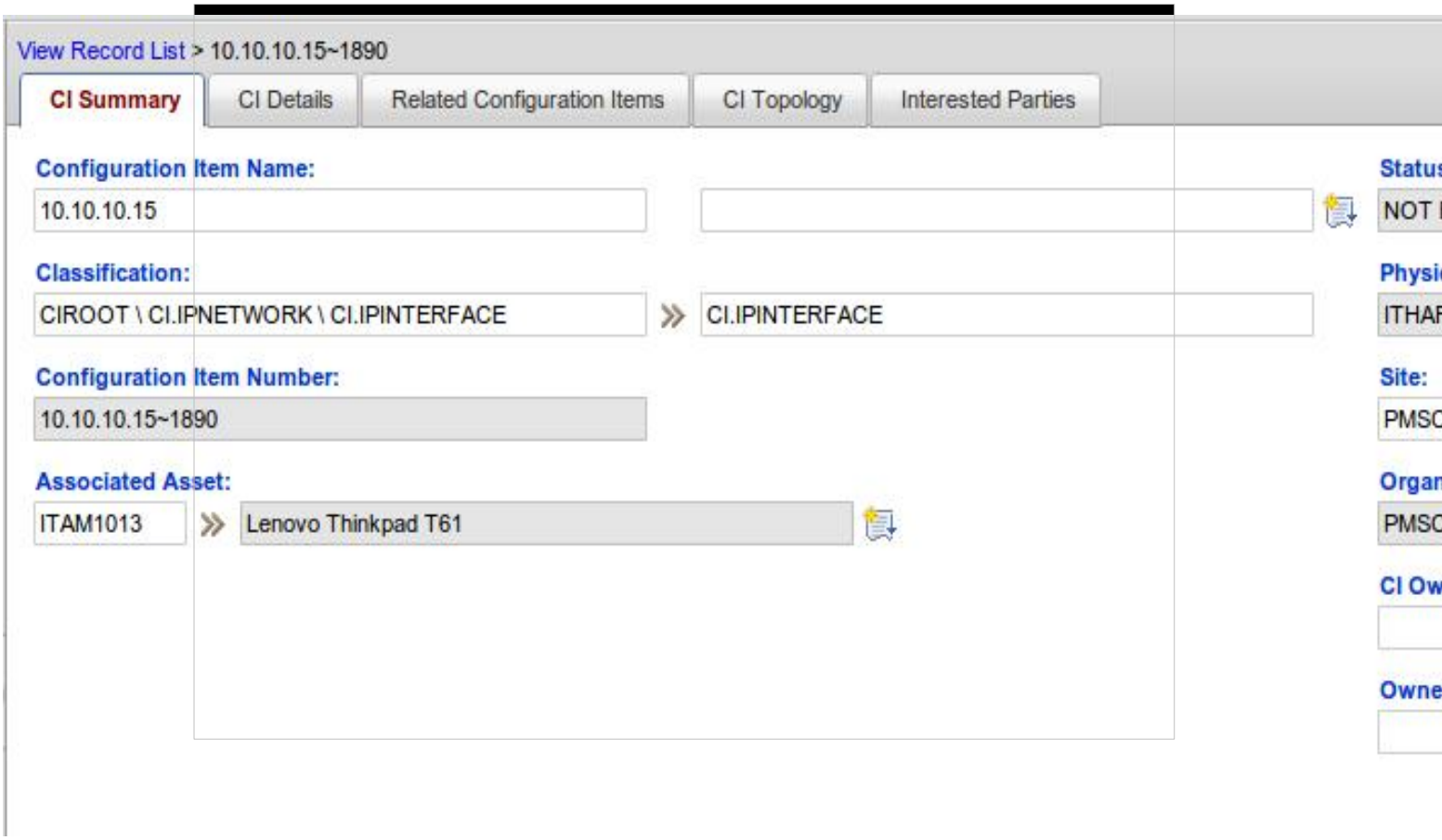


Image From
http://www.sxc.hu/photo/770540

Even more generic than the Assets, these are the parts that make up the service management components. By defining the


View Record List > 10.10.10.15~1890
CI Summary
CI Details
Related Configuration Items
CI Topology
Interested Parties
Configuration Item Name:
10.10.10.15
Classification:
CIROOT \ CI.IPNETWORK \ CI.IPINTERFACE
CI.IPINTERFACE
Configuration Item Number:
10.10.10.15~1890
Associated Asset:
ITAM1013
Lenovo Thinkpad T61
Status
Physi
Site:
PMSC
Organ
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CI Ow
Owne

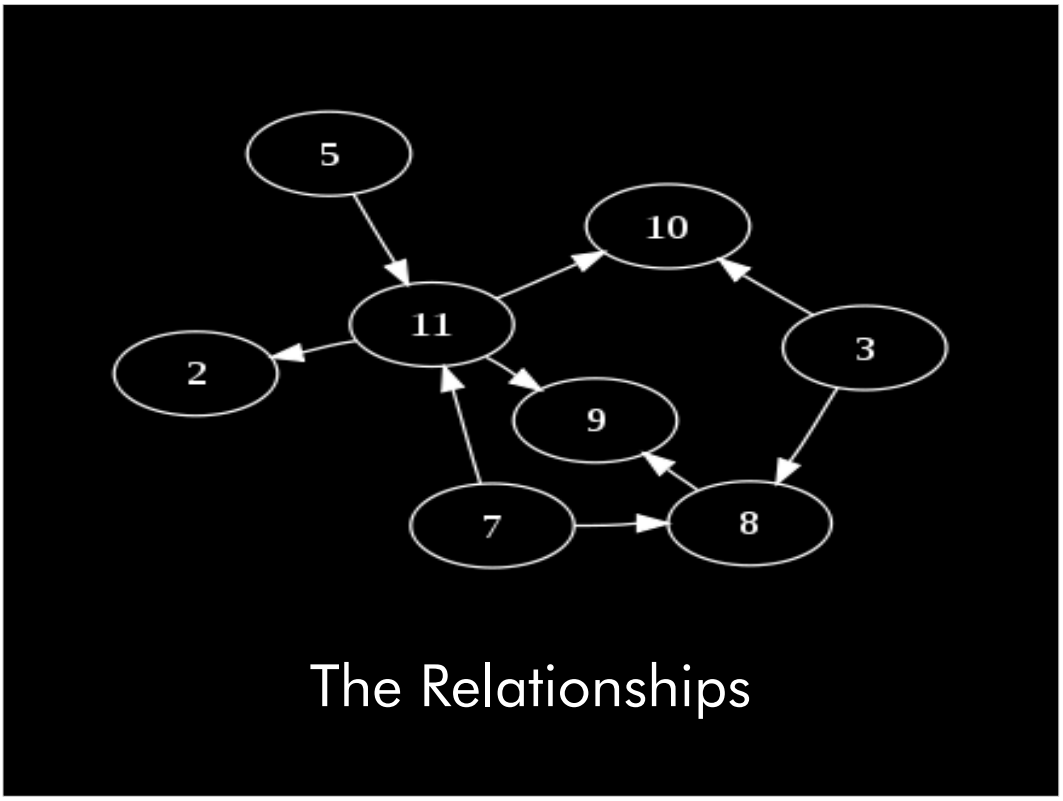
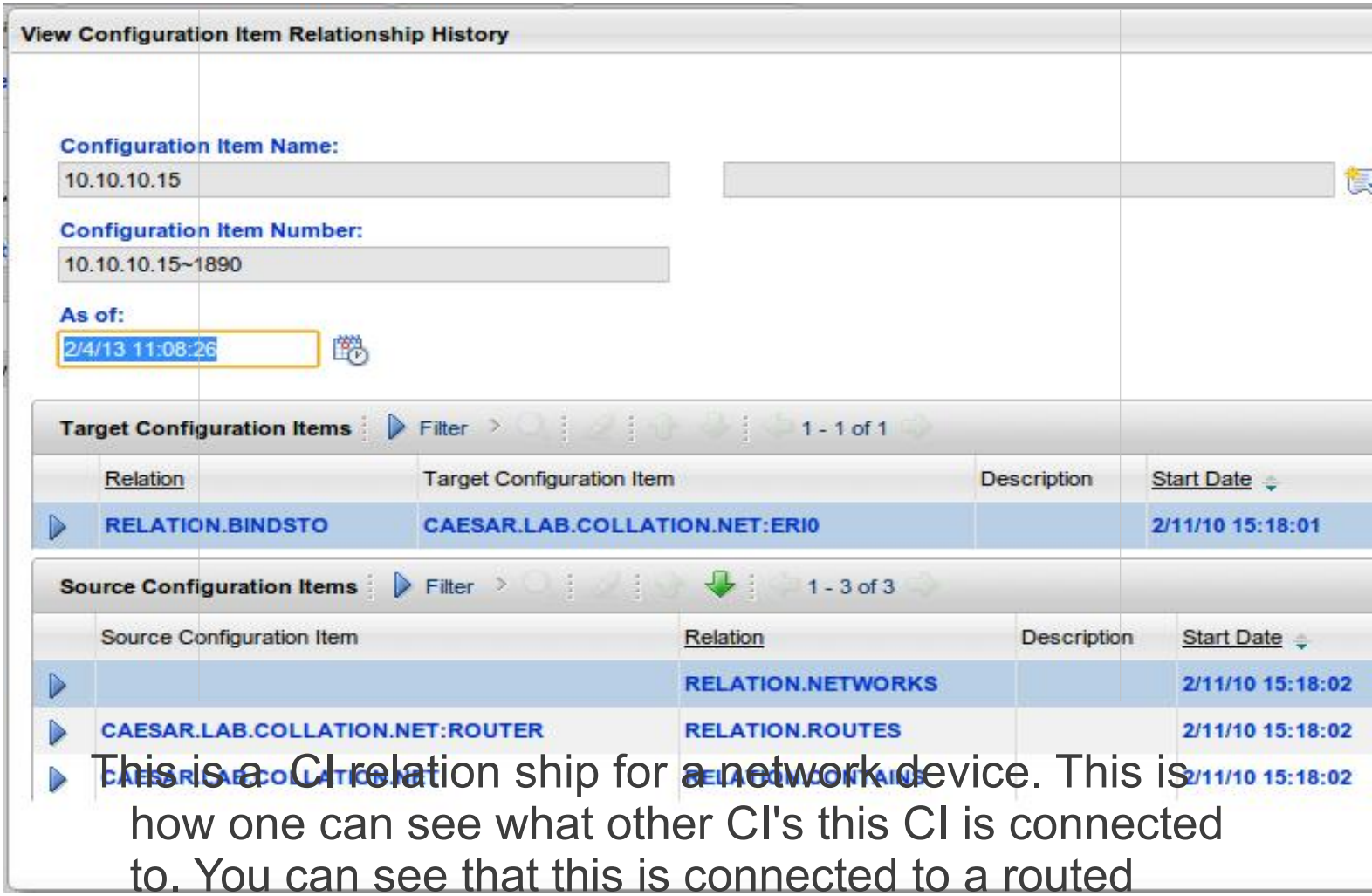


Image from http://upload.wikimedia.org/wikipedia/commons/thumb/3/39/Di

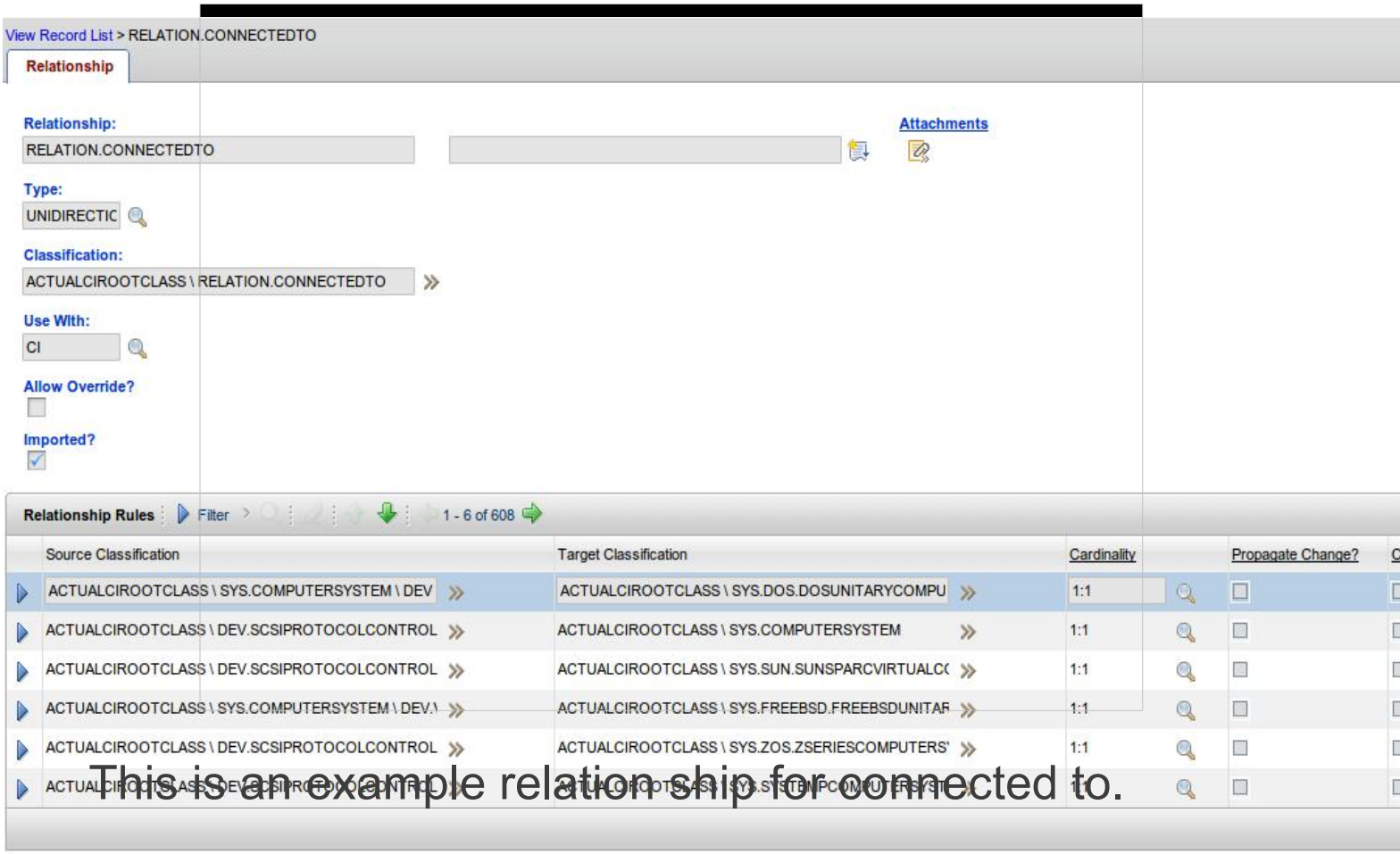
There a couple of different relation ships that we use.

One is for automation of the DPA to Assets This is based on serial number.

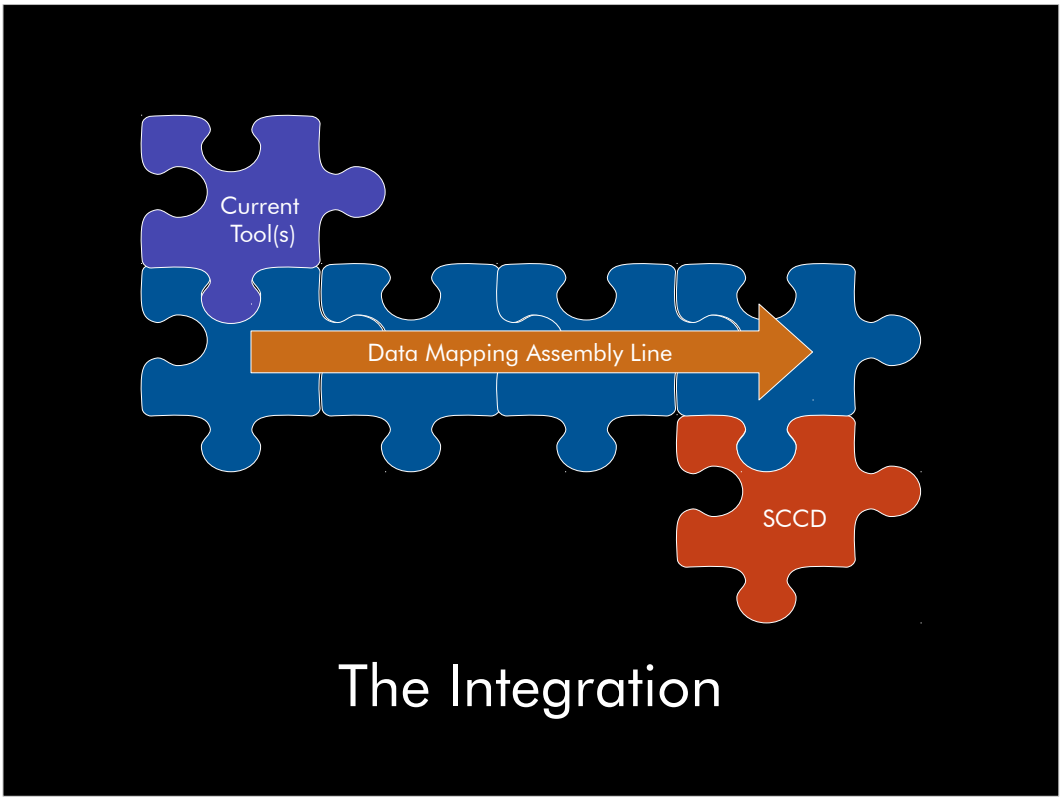
The other is the creation and linkage of assets to Cis. This can require assets to have relationships with other assets. This is handled by the classification structure withing CCMDB



- This is a CI relation ship for a network device. This is how one can see what other CI's this CI is connected to. You can see that this is connected to a routed network.



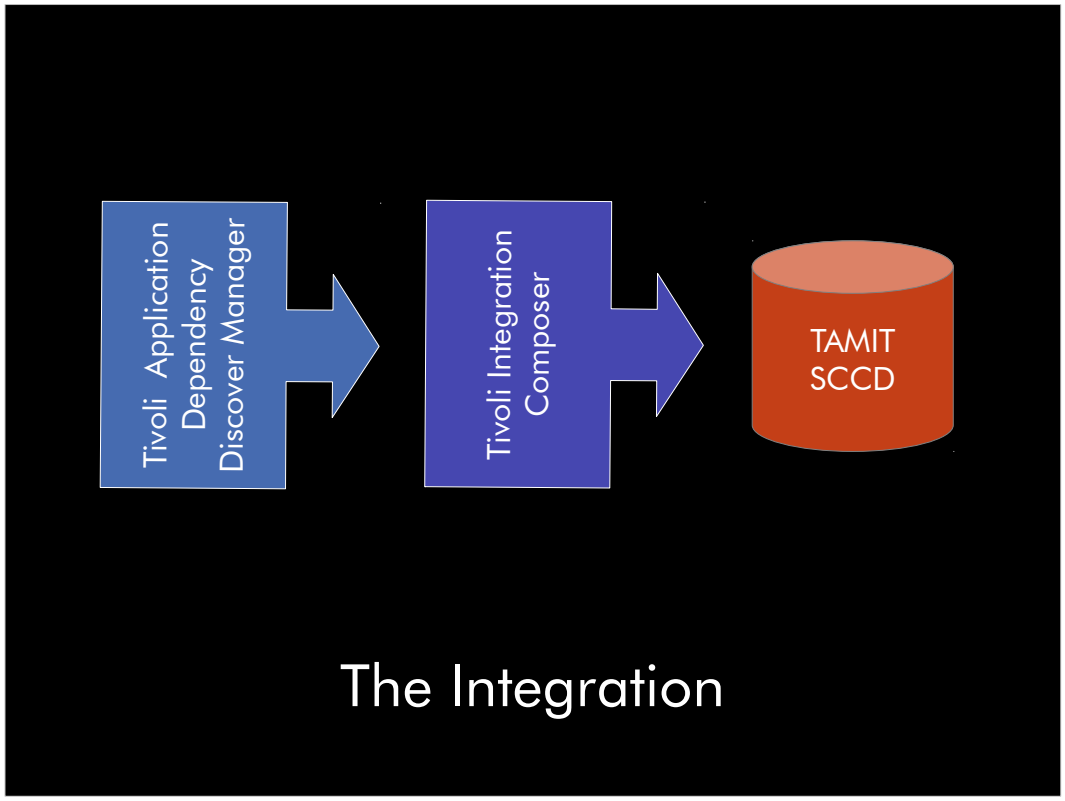
This is an example relation ship for connected to.



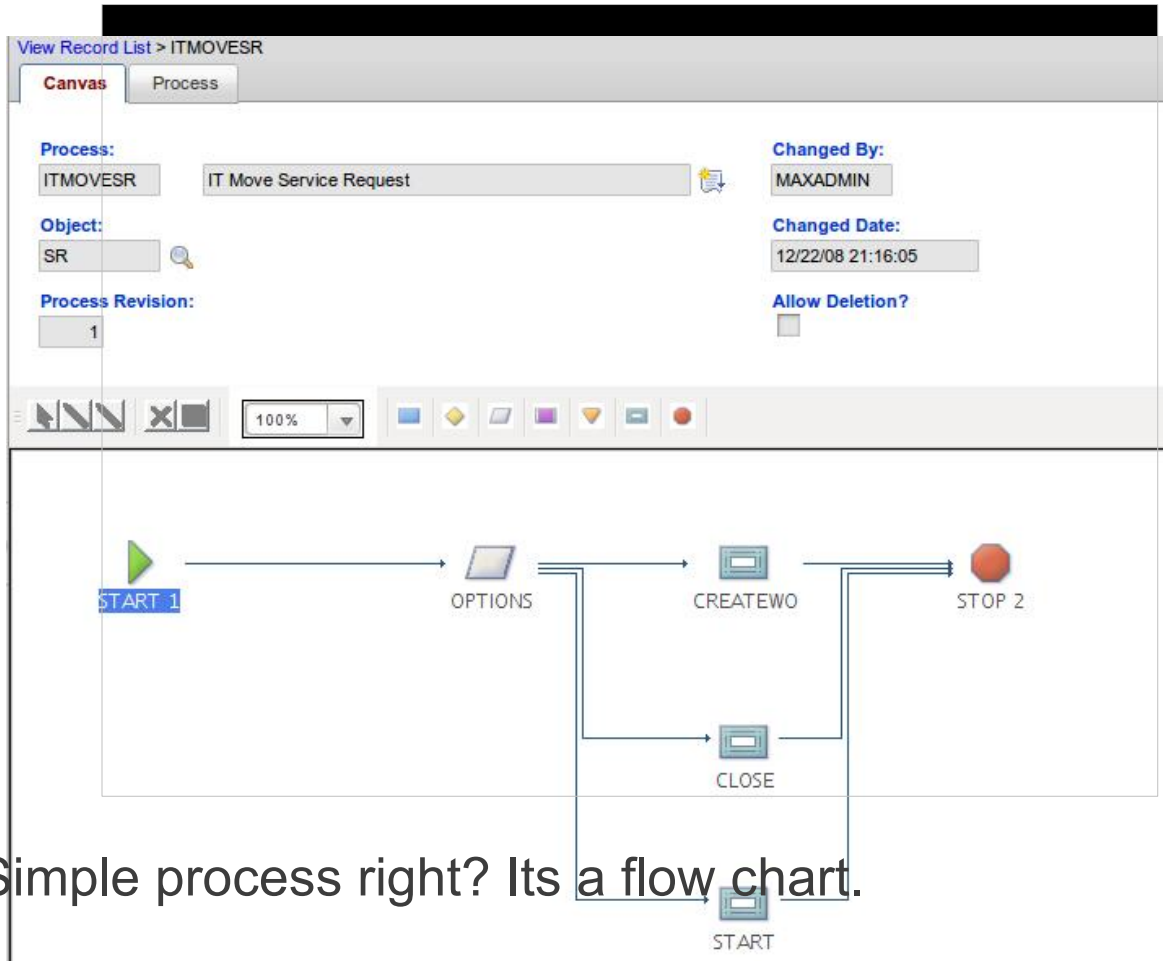
We have spreadsheets, databases, and even flat files that store our assets.

In order to input this data in to SCCD, we build assembly lines in Tivoli Directory Integrator

TDI ships with support for TPAE and DPA. In this case, we are just adding assets, not Deployed assets, although we could.



We also installed TADDM. We build TADDM to do basic discover and through the mapping system the TIC provides, to import Deployed assets.



Simple process right? Its a flow chart.

We can add many things in here, like approval rules, email templates, escalation, etc.

This is the hardest part. Trying to get each team to right down their process has been very difficult.

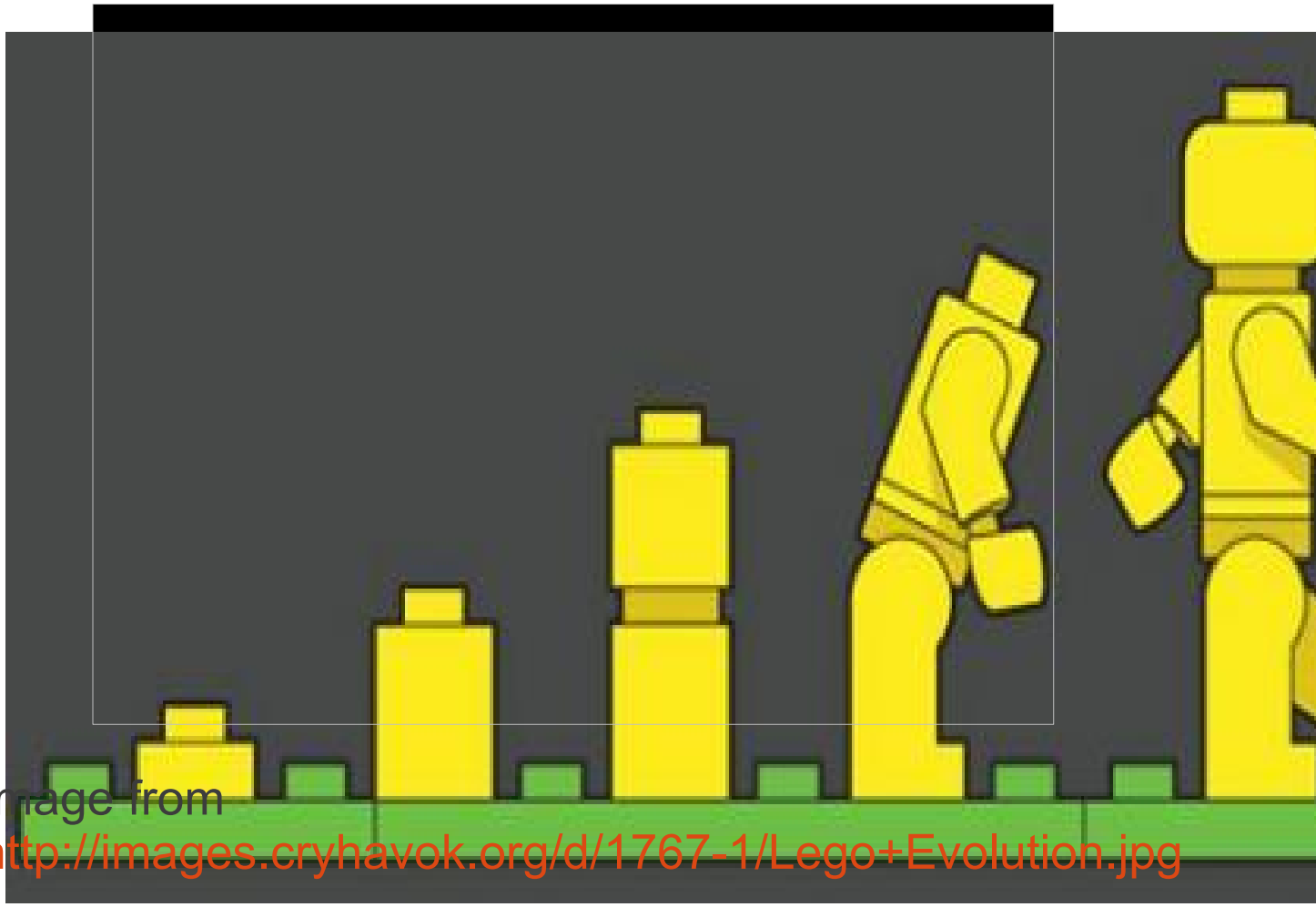


Image from
http://images.cryhavok.org/d/1767-1/Lego+Evolution.jpg

Many other things are happening within our data center (s).

As stated earlier, the group is growing both in the number of assets and the number of locations Worldwide.

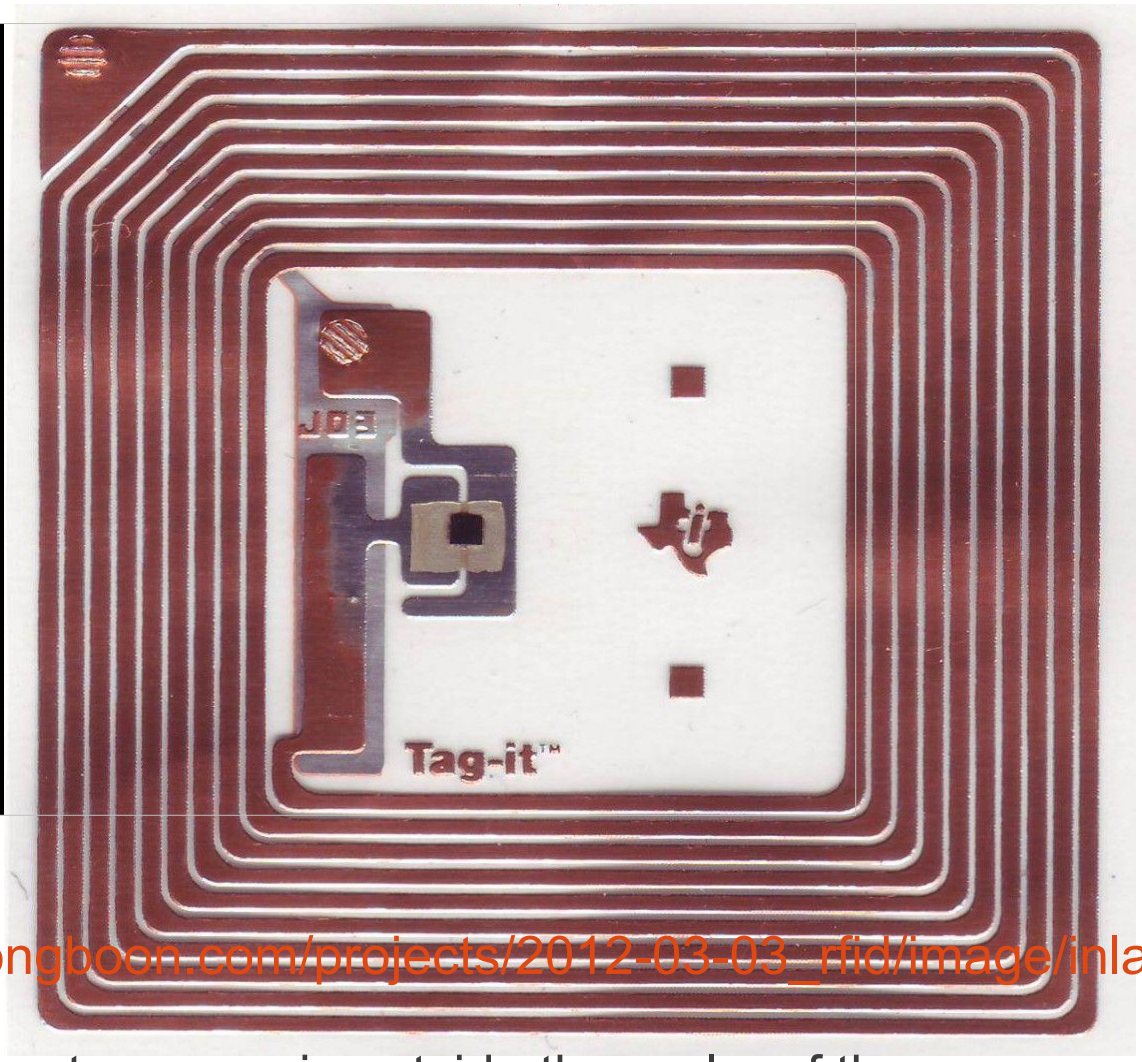


Image From
http://www.siongboon.com/projects/2012-03-03_rfid/image/inla

The procurement process is outside the realm of the benchmark center, but the higher level organization wants to attach RFIDs to select items. We have already started the process of integrating this data into our tool to help with moving and locating equipment.

Image from
http://www.sxc.hu/photo/655205

We manually add machines to the asset system. There are lots of errors, since the serial number are very small.

Finally we are also adding QR codes to certain devices. This can do two things. Link right to the asset management page, and aid in adding equipment to the system.

This is the QR code for this session.