

# Building a Portal to IT

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# About Brigham Young University

- 32,980 full time students
- 4,016 full time faculty and employees
- 13,973 part-time student employees
- Office of Information Technology is the central IT shop
- 171 Services from network to class registration system to servers
- 25,218 orders in the first year, 72,876 total

[Introduction](#)

[Customer Experience](#)

[Order Fulfillment](#)

[Advanced Customization](#)

[Questions](#)





# Purpose

1.

Show how flexible ServiceNow is in how it's been used at BYU

2.

Give you a starting point and inform you about the resources that are available.

Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions



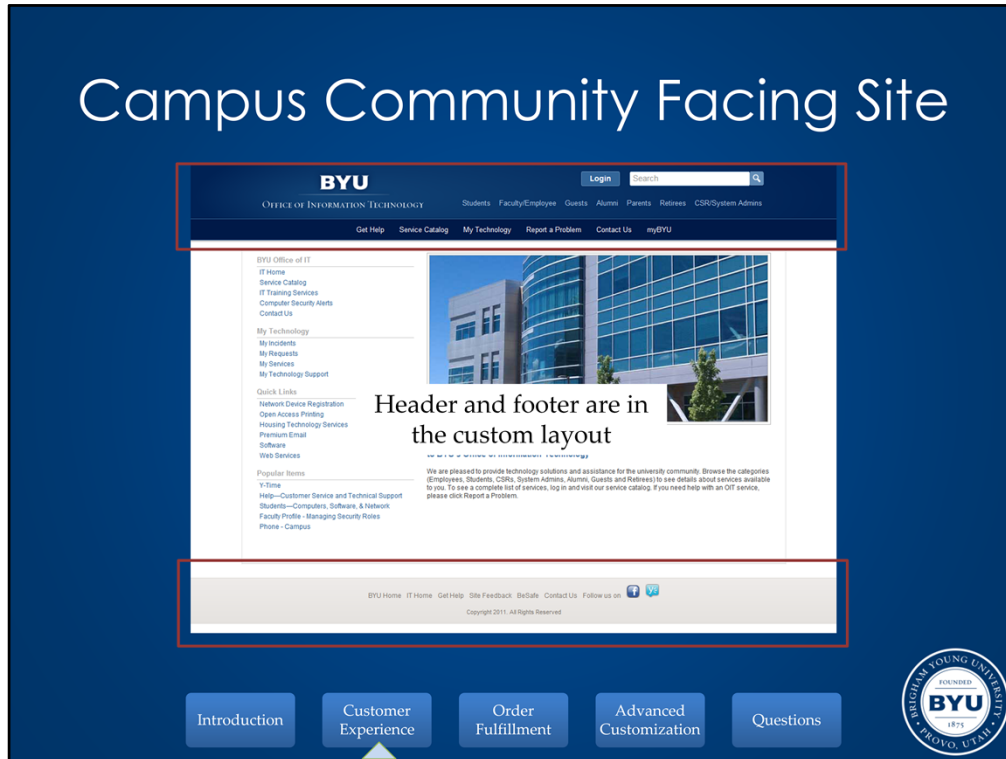
There's some information about what we did, and some about how we did it.



Three areas of focus:

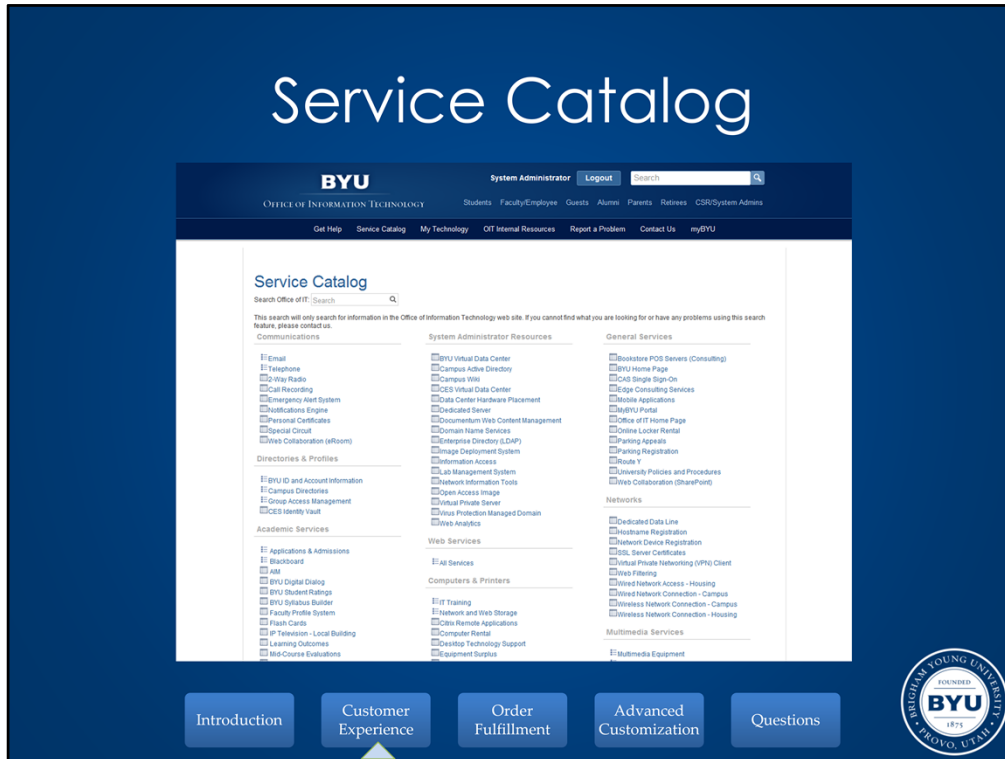
1. Customer Experience – how we’ve made things easier for our customers
2. Order fulfillment – how we’ve implemented things on the back end
3. Advanced – brief foray into JellyScript, which makes many things possible

# Campus Community Facing Site



ServiceNow is the portal to OIT's services

- Provides descriptions and documentation for our services
- Several methods of navigating the site (search, topical and role based menus, and an overall list of services) all leads to the same content with an actionable Service Catalog where possible



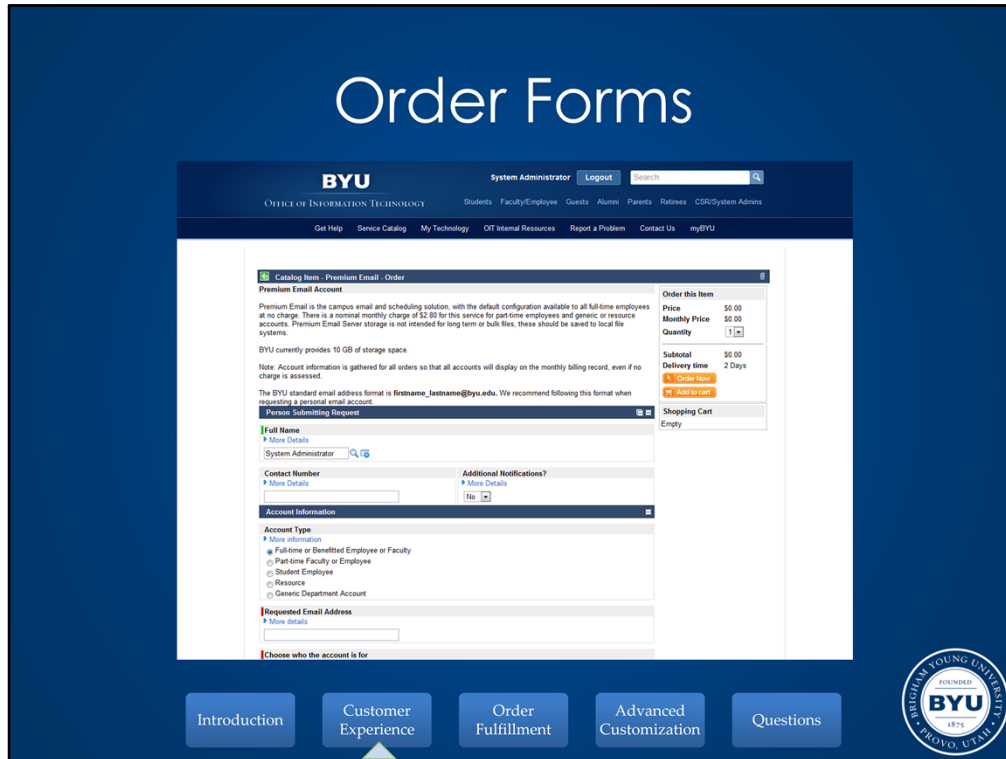
We use the out-of-the-box Service Catalog structure with the content driven by the Knowledge Base.

Respects users roles and utilizes knowledge feedback and search

The screenshot shows a web page titled "Service Descriptions" for "Phone - Campus". The page is part of the BYU Office of Information Technology service catalog. It includes a navigation menu with options like "Get Help", "Service Catalog", "My Technology", "OIT Internal Resources", "Report a Problem", "Contact Us", and "myBYU". The main content area is titled "Phone - Campus" and provides detailed information about the service, including access instructions, options, and additional documentation. On the right side, there are links for "Order This Service" (Order Service, Modify Service, Remove Service, Change Name Display) and "Similar Articles" (Phone - Housing, Long Distance, Emergency Phone, Call Recording, Audio-Net Conferencing). At the bottom, there are five navigation buttons: "Introduction", "Customer Experience", "Order Fulfillment", "Advanced Customization", and "Questions". The BYU logo is visible in the top right corner of the page.

Central place for documentation for each service.  
 Added breadcrumbs using the Service Catalog Structure and Knowledge Base Categorizations.  
 Order forms are available from the right side.

# Order Forms



- Made a custom CMS page for forms and guides
  - URL's are smaller and simpler
  - Prevents issues with URL's that are too long (specifically with order guides)
- Form is wrapped in an iFrame block that auto resizes
- Dynamic Descriptions to separate the description text from the functioning of the form for easier updating
  - Knowledge Manager has control over the descriptions on all order forms
  - Descriptions are displayed via a UI Page variable
  - UI Page looks up a custom table that contains descriptions
  - Knowledge Manager has access to the table
  - Provides a way to change the order form without needing the update set process

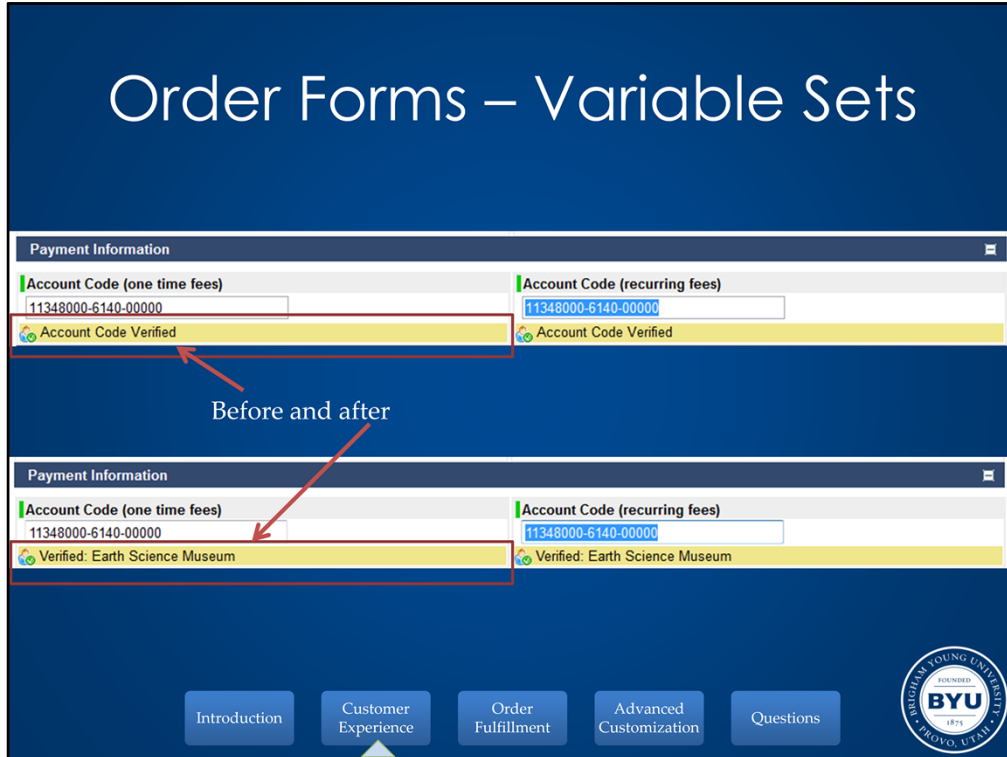
Next 3 slides on order forms:

1. Benefits of Variable Sets
2. How we incorporated Monthly Price
3. Custom Cart for free orders





# Order Forms – Variable Sets



## Variable Sets

- Consistent experience for contact details and billing information
- Easily update and make changes

## Recent Example:

All of the account code verification functionality is rolled into a Variable set, including AJAX calls to that billing system.

We just made a change that displays department information in the verification box. The change affects 90+ order forms, but is extremely easy to roll out because it modifies the variable set and not the individual order forms.

# Order Forms – Monthly Price

The screenshot displays a web form for ordering a Premium Email Account. The form is titled 'Premium Email Account' and includes a description of the service. The form fields are as follows:

- Full Name:** System Administrator
- Contact Number:** (empty)
- Account Type:** Radio buttons for Full-time or Benefitted Employee or Faculty, Part-time Faculty or Employee, Student Employee, Resource, and Generic Department Account.
- Requested Email Address:** (empty)

The summary table on the right side of the form is as follows:

Item	Price
Price	\$0.00
Monthly Price	\$2.85
Quantity	1
Subtotal	\$0.00
Delivery time	2 Days

At the bottom of the page, there are navigation buttons: Introduction, Customer Experience, Order Fulfillment, Advanced Customization, and Questions. The BYU logo is visible in the bottom right corner.

We customized the Shopping Cart and added in a monthly price when needed.

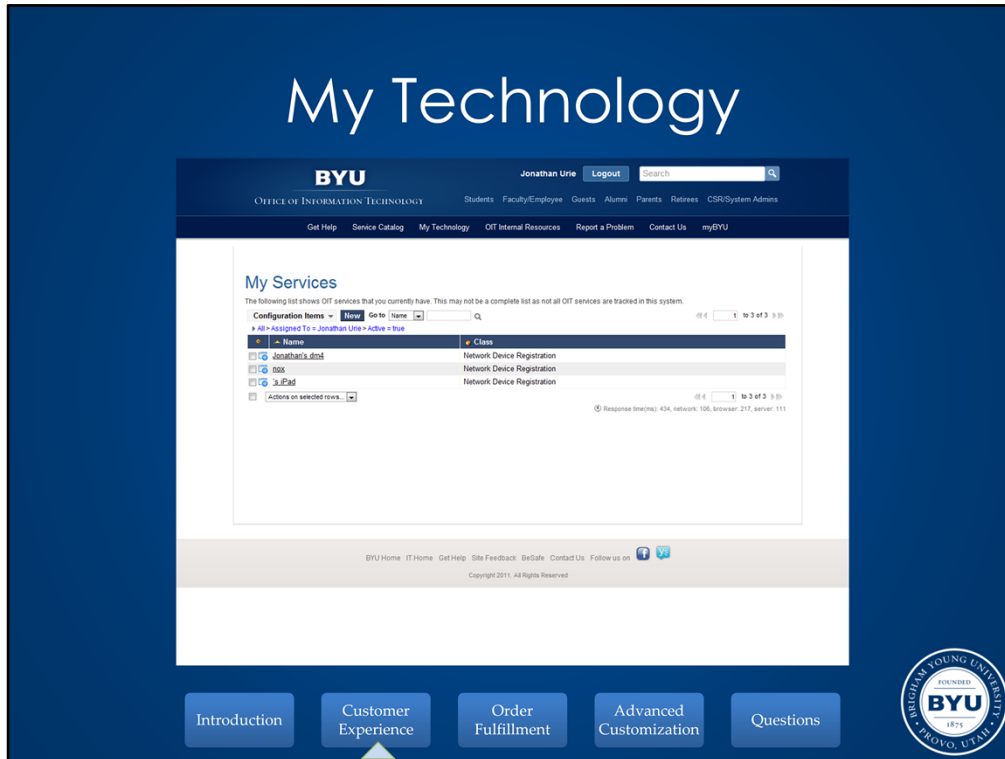
A UI Script does the heavy lifting of calculating differences in the price depending on the options selected. There is a simple javascript function that we can call that updates the price.

# Order Forms – Custom Cart

The screenshot displays the 'BYU' System Administrator interface. At the top, there is a navigation bar with 'System Administrator' and 'Logout' links, along with a search bar. Below this is a secondary navigation bar with links for 'Students', 'Faculty/Employee', 'Guests', 'Alumni', 'Parents', 'Retirees', and 'CSR/System Admins'. The main content area is titled 'Catalog Item - Change Name Display'. It features several sections: 'Change Name Display' with a 'Person Submitting Request' field; 'Full Name' with a 'More Details' link and a search field; 'Contact Number' with a 'More Details' link and a dropdown menu; 'Change Caller Name Display' with 'Phone Number' and 'Net ID of Person Responsible' fields; and 'Previous Caller Name Display' and 'New Caller Name Display' fields. On the right side, there is a 'Request Options' section with 'Submit Request' and 'Add Request to Cart' buttons, and a 'Shopping Cart' section showing 'Empty'. A red arrow points to the 'Submit Request' button. At the bottom of the page, there is a navigation bar with buttons for 'Introduction', 'Customer Experience', 'Order Fulfillment', 'Advanced Customization', and 'Questions'. The BYU logo is visible in the bottom right corner.

We received user feedback that the cart was confusing when the order was just submitting information or requesting something that didn't have a price.

To improve their experience we took the original cart, made a copy, and stripped almost everything out. We changed the wording so it reflected the "free" nature of the orders being submitted.



To provide a place for users to find out what the status is for their tasks we created a “My Technology” menu. It contains things like:

- My Requests
- My Technology Support (example of a custom JellyScript page, more on JellyScript later)
- My Services
- My Training Schedule
- My Notifications

Each link contains information that is filtered or tailored to the individual. There are a few other links that show up depending on roles

# Notifications

## BYU Office of Information Technology

We have received the following request:

**Order #:** REQ13293  
**Requested for:** Kenneth Cline  
**Due date:** 2012-04-30 12:35:49 MDT  
**Opened:** 2012-04-26 14:36:02 MDT  
**Short description:** Standard 6 Button Office Phone Set (7962)

### Requested items

Item #	Item Description	Due Date
RITM14017	Standard 6 Button Office Phone Set (7962)	2012-04-30 12:35:49 MDT

To view the current status of your requests go to <http://itbuild.byu.edu/go/mvrequests>.

If you have any questions please contact us.

Ref:MSG047295

This message has been sent to you because of your notification preferences. If you would like to disable this notification [click here](#). If you would like to disable other notifications, please [click here to change your other notification preferences](#).

<http://it.byu.edu> - [it@byu.edu](mailto:it@byu.edu) - 801-422-4000

Introduction

Customer Experience

Order Fulfillment

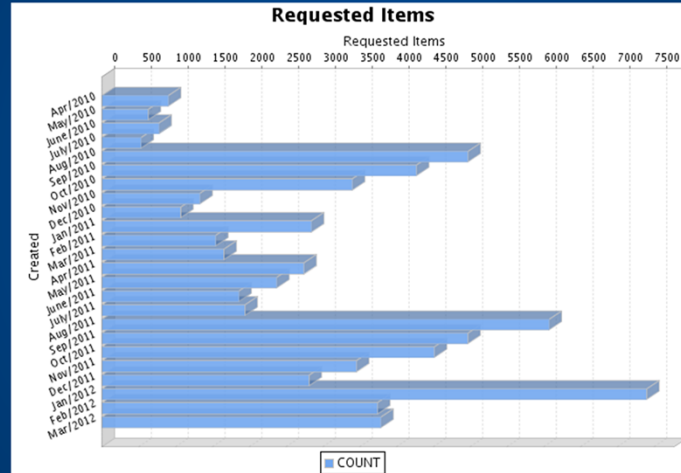
Advanced Customization

Questions



Email header and footers, including a link that allows for easy unsubscribing.

# Service Catalog Usage



Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions



Moving on to what's going on in the background.

We've seen steadily increasing usage of the Service Catalog

As of April 26, 2012...

- 67,131 Requests
- 72,876 Requested Items

[Introduction](#)

[Customer Experience](#)

[Order Fulfillment](#)

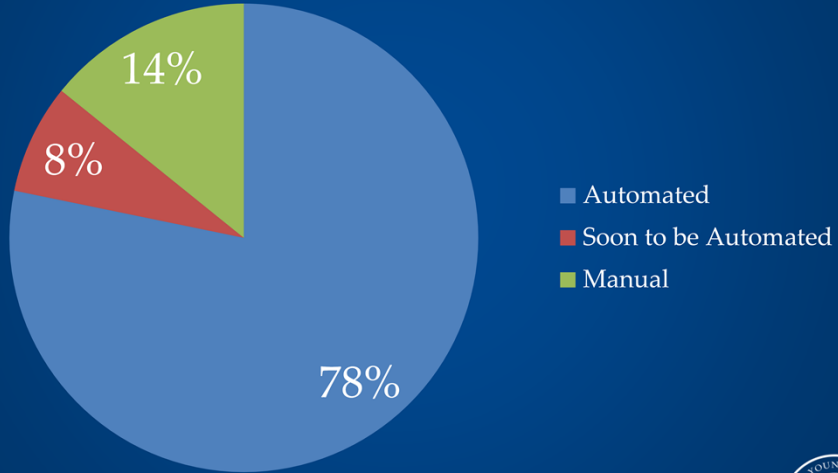
[Advanced Customization](#)

[Questions](#)





# Order Fulfillment Automation



Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions





# Stages

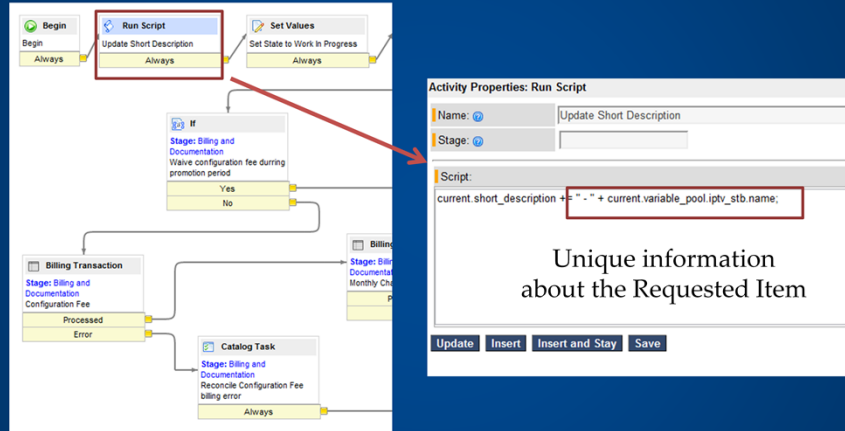
The screenshot shows a web interface for BYU's Office of Information Technology. At the top, there's a navigation bar with the BYU logo, the user's name 'Jonathan Urie', and a 'Logout' button. Below that, there are links for 'Students', 'Faculty/Employee', 'Guests', 'Alumni', 'Parents', 'Retirees', and 'CSR/System Admins'. A secondary navigation bar includes 'Get Help', 'Service Catalog', 'My Technology', 'OIT Internal Resources', 'Report a Problem', 'Contact Us', and 'myBYU'. The main content area displays a table of 'Requested Items' with columns for 'Number', 'Short description', and 'Stage'. The table lists 14 items, mostly related to network device registration. The 'Stage' column shows various completion statuses like 'Approved', 'Processing Information (Completed)', and 'Completed'. At the bottom of the interface, there are five buttons: 'Introduction', 'Customer Experience', 'Order Fulfillment' (which is highlighted with a yellow arrow), 'Advanced Customization', and 'Questions'. The BYU logo is also present in the bottom right corner.

Number	Short description	Stage
BITM180647	Network Device Registration - 's iPad	Approved Processing Information (Completed) Completed
BITM179566	Network Device Registration - Jonathan's dm4	Completed
BITM163290	Network Device Registration - feater shinetop	Completed
BITM161713	Network Device Registration - Jonathan's dm4	Completed
BITM161606	Network Device Registration - Remove Jonathan's dm4	Completed
BITM159886	Network Device Registration - jonathanurie's iPad	Completed
BITM154148	Network Device Registration - nox	Completed
BITM153876	Network Device Registration - nox	Completed
BITM149222	Network Device Registration - nox	Completed
BITM148252	Network Device Registration - Jonathan's dm4	Completed
BITM147975	Network Device Registration - Jill's Mac	Completed
BITM140592	Personal Email Certificate - Order	Completed
BITM131748	Request an Organizational Unit (OU) - OIT-IS-msproject	Completed
BITM102363	Caller Name - Change - For Phone Number: 2-8701	Completed

We try and use stages appropriate to the order that give a real indication to users of where the order is at. Some are better than others but overall it's pretty good. Significant improvement over our previous system.



# Short Descriptions



- Introduction
- Customer Experience
- Order Fulfillment
- Advanced Customization
- Questions

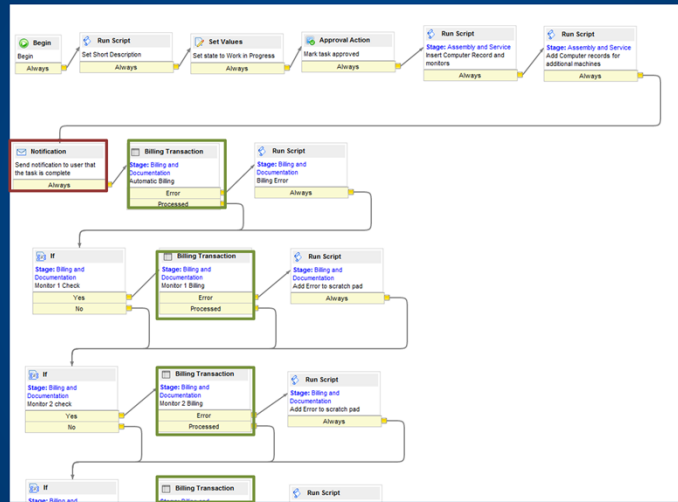


In addition to stages we have found it is very important to include key information in the short description of the Requested Item and in the subject of emails.

Examples:

- For phone orders we include the phone number – “Phone Order – 2-1234”
- For accounts for individuals we will typically include name and username – “Email Order for John Doe (john123)”

# Order of Operations



Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions



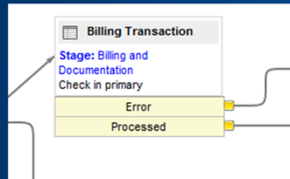
When working out the order fulfillment process,

1. Get them what they need
2. Let them know

Then

3. Work out billing and other paperwork

# Billing Activity



Activity Properties: Billing Transaction

Name	Check in primary
Stage	Billing and Documentation
Service Type	COMPUTING
Event Type	Remove
Requested For	
Service Number	
Bill Note	
Charge Code	
Quantity	1
Account Code	
Address Type	Work
Email Address	

Script:

```
/* Set variables for each field on this form
 * Available Variables:
 * bill_u_item_code
 * bill_u_address_type
 * bill_u_email_address
 * bill_u_quantity
 * bill_u_event_type
 * bill_u_service_type
```

Advanced:

Update Insert Insert and Stay Save

Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions



We created a custom workflow activity that calls a web service behind the scenes to add or remove the billing records. In the case of an error we have a manual task to reconcile it.



# JellyScript

- Provides Complete Control
- [wiki.service-now.com](http://wiki.service-now.com) articles
  - Jelly Tags
  - Extensions to Jelly Syntax
  - How to Escape in Jelly
- Several phases of processing, keep them straight

Introduction   Customer Experience   Order Fulfillment   **Advanced Customization**   Questions



## Helpful Links

- List of Tags that are used - [http://wiki.service-now.com/index.php?title=Jelly\\_Tags](http://wiki.service-now.com/index.php?title=Jelly_Tags)
- Basics of JellyScripting - [http://wiki.service-now.com/index.php?title=Extensions\\_to\\_Jelly\\_Syntax](http://wiki.service-now.com/index.php?title=Extensions_to_Jelly_Syntax)
- Escaping in Jelly - [http://wiki.service-now.com/index.php?title=How\\_to\\_Escape\\_in\\_Jelly](http://wiki.service-now.com/index.php?title=How_to_Escape_in_Jelly)



# Examples

## Incident Print Preview

Click to Print

**INC0042895 — IT Home Page Links out of date**

Priority: **4 - Low** | Assigned to: IS-Tools — Jonathan Urie  
Service: Office of IT Home Page | Caller: James Farrer (801-422-1116)  
Symptom: Feature Not Working | 2312 ITB Provo, UT 84602

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**Description:**  
On the front page, there's a duplicate OIT Internal Resources link and the Email Migration Information link needs to be removed.

**Worklog:**

---

2012-02-23 00:01:26 - **System** Work Log  
(System)incident automatically closed after 8 days in the Closed state.

---

2012-02-14 12:57:54 - **Jonathan Urie** Work Log  
(Closing Comments) Fixed by deleting the links on all three instances

Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions



Our Incident form has too much information for printing so we created a UI Page that contains the important details for someone to print out and carry into the field.



# Examples

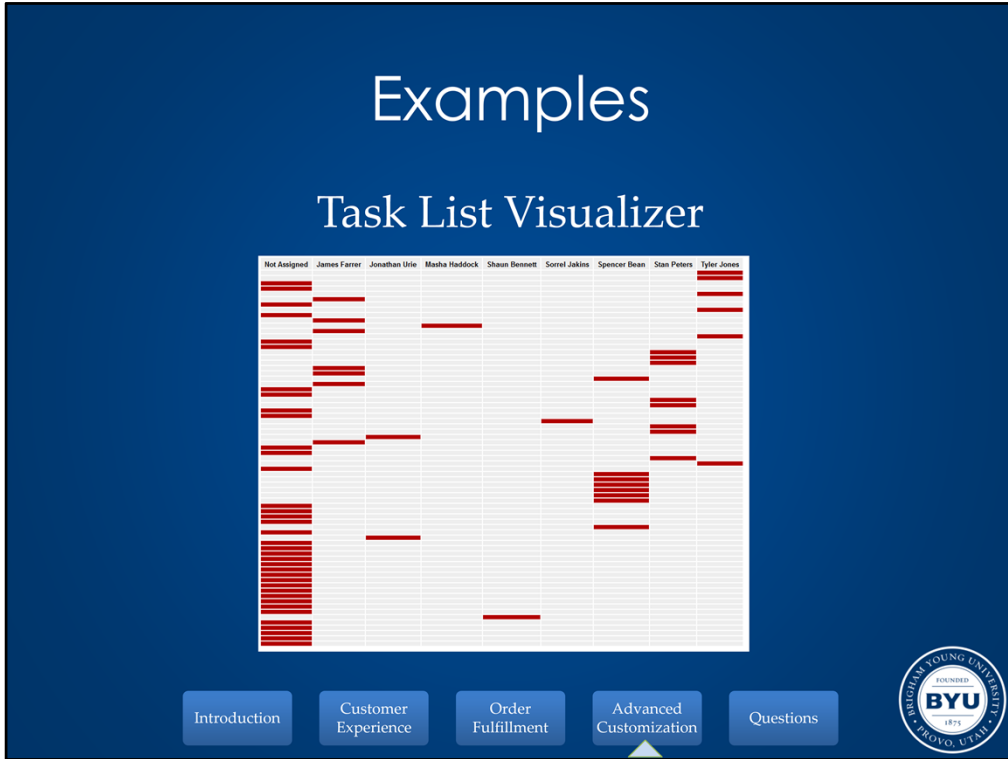
## Open Ticket Aging (the "rainbow report")

Group	Open	In Progress	Closed	Total
General	100	200	300	600
IT Services	50	100	150	300
IT Support	30	60	90	180
IT Infrastructure	20	40	60	120
Production	10	20	30	60

- Introduction
- Customer Experience
- Order Fulfillment
- Advanced Customization
- Questions



We had reporting needs that went beyond what the built-in functionality could provide. We have created several custom reports that have been very helpful.



Here's a prototype we've been working on to help with prioritizing work within the team. It only took a few hours to put it together.





# Basic Jellyscript Example

```
<g:evaluate var="jvar_foo" object="true">  
  var foo = new GlideRecord("table");  
  foo.addQuery("field", "criteria");  
  foo.query();  
  foo;  
</g:evaluate>
```

The last line of the evaluate is stored

```
<table>  
  <tr><th>Column Title</th></tr>  
  
<j:while test="{jvar_foo.next()}">  
  <tr><td>{jvar_foo.number}</td></tr>  
</j:while>  
  
</table>
```

The test is formatted exactly like a regular GlideRecord query

[Introduction](#)

[Customer Experience](#)

[Order Fulfillment](#)

[Advanced Customization](#)

[Questions](#)





# Lessons Learned

- You can do just about anything
  - Get to know the documentation
  - Look through the out-of-the-box pieces, there are many examples, so that aren't documented
  - Many things just need a CMS wrapper to be exposed
- It's worth the extra time to cater to the user
  - Prepopulate user info
  - Add error checking

Introduction

Customer Experience

Order Fulfillment

Advanced Customization

Questions





# Thank You

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[Introduction](#)

[Customer Experience](#)

[Order Fulfillment](#)

[Advanced Customization](#)

[Questions](#)

