

Academic Process Automation

Lessons Learned with
Ellucian Workflow 2.0



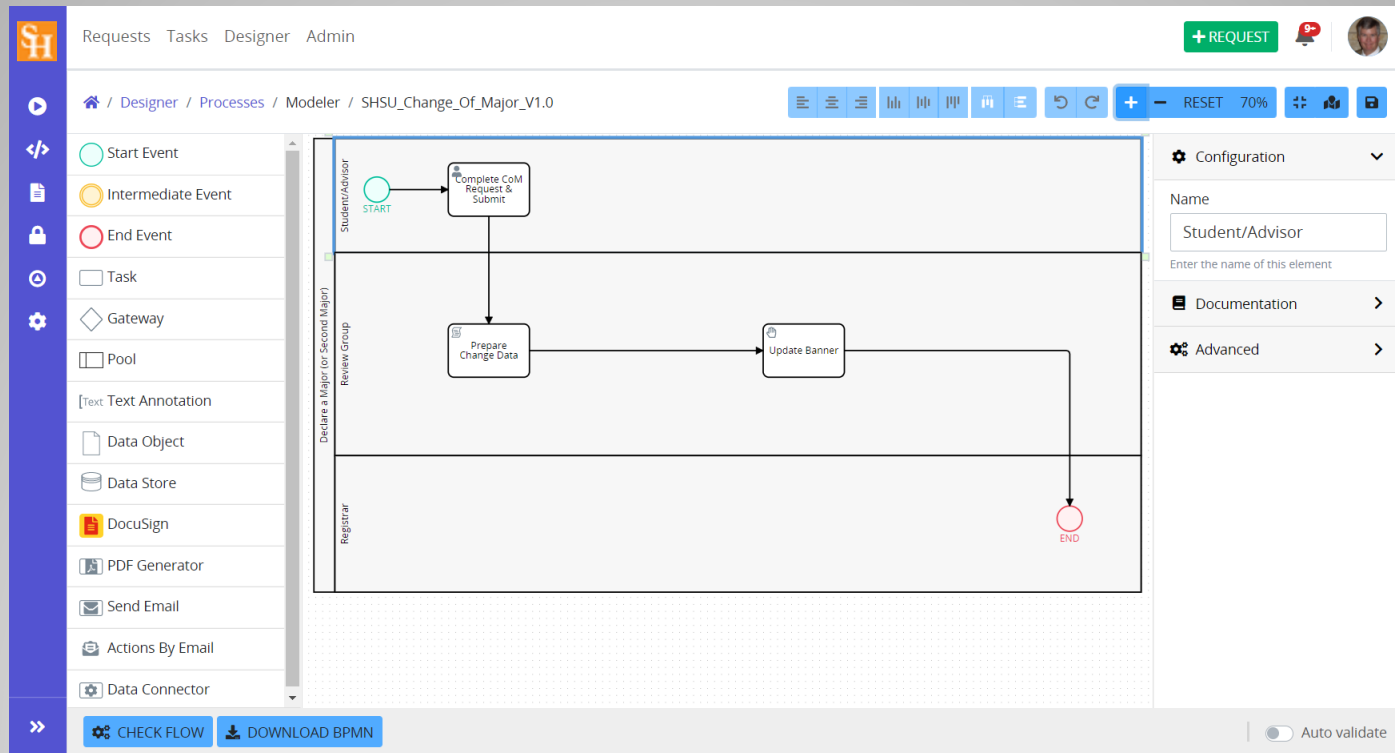
May 26, 2022
8:30 am. – 9:30 am.

Chuck Mize



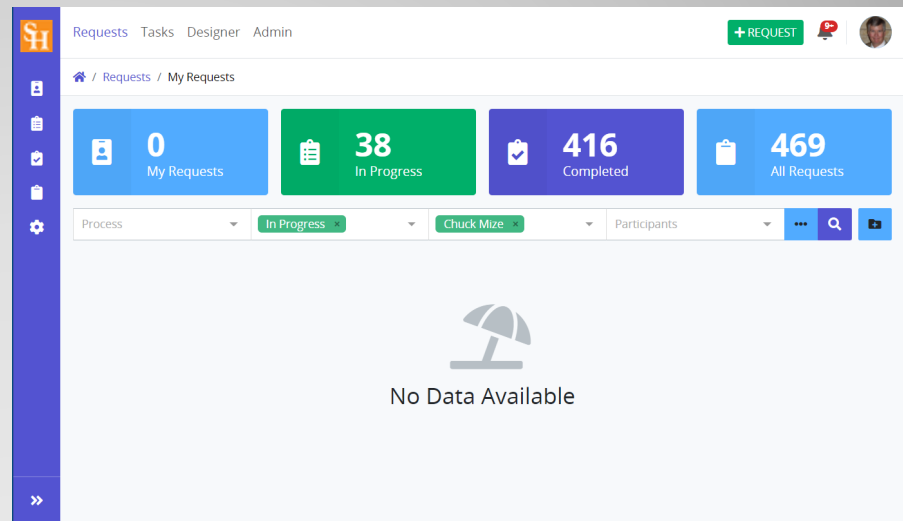
Sam Houston State University
Huntsville, Texas

This session will provide an overview of workflow automation using Ellucian Workflow 2.0



Overview

- Ellucian Workflow 2.0
 - ProcessMaker 4.0
 - Ethos Plugin & functions
- Features
 - Low-code platform
 - Reusable
 - screens (forms)
 - scripts (triggers)



Overview

“There is surely nothing quite so useless as doing with great efficiency what should not be done at all.”

- Peter Drucker

When to Automate



ROUTINE



BROAD IMPACT



WELL-DEFINED,
CLEARLY UNDERSTOOD

When to Automate

Basic Workflow 2.0 Instance

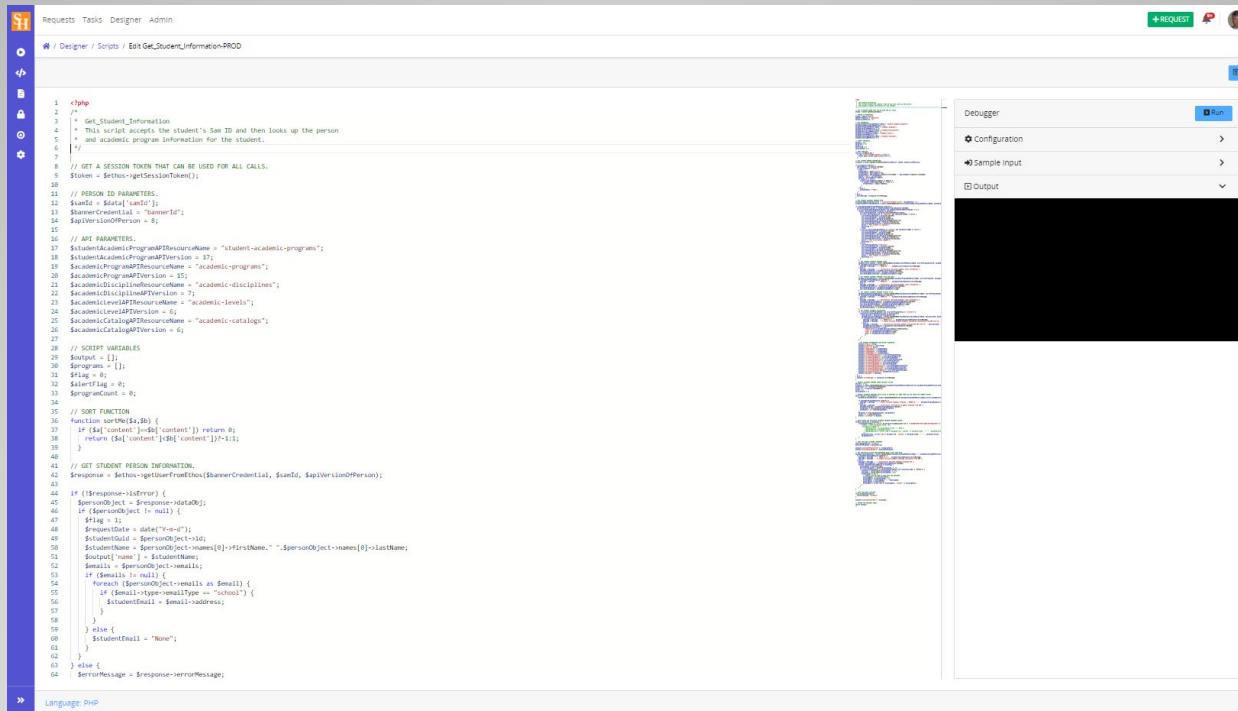
- Electronic Forms
- Internal DB / Business Logic
- Attachments / Uploads
- Digital Signatures for forms (DocuSign)

Integrated

- SIS Data via Ethos configuration & functions
- Single Sign-On

Requirements - Capabilities

- SIS data through scripted function calls
- Returns data per data model definitions



```
1 <?php
2 *
3 * Get_Student_Information
4 * This script accepts the student's Sam ID and then looks up the person
5 * and academic program information for the student.
6 */
7
8 // GET A SESSION TOKEN THAT CAN BE USED FOR ALL CALLS.
9 $token = $this->getSessionToken();
10
11 // PERSON ID PARAMETERS:
12 $samId = $this->samId();
13 $bannerCredential = "bannerId";
14 $ipVersionOfPerson = 8;
15
16 // API PARAMETERS:
17 $studentAcademicProgramTheSourceName = "student-academic-program";
18 $studentAcademicProgramAPIVersion = 17;
19 $academicProgramTheSourceName = "academic-program";
20 $academicProgramAPIVersion = 15;
21 $academicDisciplineTheSourceName = "academic-disciplines";
22 $academicDisciplineAPIVersion = 7;
23 $academicLevelTheSourceName = "academic-levels";
24 $academicLevelAPIVersion = 6;
25 $academicCatalogTheSourceName = "academic-catalogs";
26 $academicCatalogAPIVersion = 6;
27
28 // SCRIPT VARIABLES
29 $output = [];
30 $programs = [];
31 $string = 0;
32 $silentFlag = 0;
33 $springCount = 0;
34
35 // SORT FUNCTION
36 function sortOrder($a,$b) {
37     if ($a['content'] >=$b['content']) return 0;
38     return ($a['content'] <=$b['content'])?1:-1;
39 }
40
41 // GET STUDENT PERSON INFORMATION.
42 $response = $this->apiClientFromToken($bannerCredential, $samId, $ipVersionOfPerson);
43
44 if (!$response->isHttp()) {
45     $personObject = $response->dataObj;
46     if ($personObject != null) {
47         $flag = 1;
48         $requestDate = date("Y-m-d");
49         $studentGmail = $personObject->id;
50         $studentName = $personObject->names[0]>>firstName . " " . $personObject->names[0]>>lastName;
51         $student['name'] = $studentName;
52         $email = $personObject->emails;
53         if ($email != null) {
54             foreach ($personObject->emails as $email) {
55                 if ($email->type == 'school') {
56                     $studentEmail = $email->address;
57                 }
58             }
59         } else {
60             $studentEmail = "None";
61         }
62     }
63 } else {
64     $errorMessage = $response->errorMessage;
65 }
```

Ethos Functions

- Primary Resources
 - Process Maker
 - Ellucian Workflow Functions
 - Ellucian Ethos APIs
 - Ellucian Communities / Workflow

Resources


- Workflow 2.0 functionality
 - ProcessMaker 4.0 courses
 - Introduction to BPMN
 - Process Designer
 - UX Expert
 - Process Architect
 - <https://university.processmaker.com/>

Resources (ProcessMaker U)

University@ProcessMaker x + university.processmaker.com

ProcessMaker University

My courses




Introduction to BPMN

Introduction to BPMN

- Free Certificate
- Self paced learning
- Level: Basic
- 6-8 Hours to complete
- English

- Business Process Model and Notation allows you to diagram models and business processes
- Our BPMN Course shows you how each process element works
- You will learn best practices for creating legible and informative process models.
- After taking this course you will be able to model any use case accurately, creating a solid foundation for automation.

Access




PROCESS DESIGNER

Process Designer Course

- Certificate
- Self paced learning
- Level: Intermediate
- 8-10 Hours to complete
- English

- Requires the Introduction to BPMN course
- You will learn everything you need to design and automate a Process from the beginning to the end.
- After finishing this course, students will be able to use these features in ProcessMaker 4.2:
 - Create a Process model using the Process Designer.
 - Create Screens in the Screen Builder to allow users to input information.
 - Use Admin settings to create and manage User Accounts and Groups.
 - Create ProcessMaker Collections.
 - Send email notifications.
 - Configure conditions to route Requests to the proper user.
 - Run a Request from the beginning to end.

Access




UX EXPERT

UX Expert Course

- Certificate
- Self paced learning
- Level: Advanced
- 2-4 Hours to complete
- English

- Requires the Introduction to BPMN and Process Designer Course
- Teaches you how to create informative charts and graphics leveraging Request data.
- You will be able to design custom Dashboards to see real time workflow performance at a glance and identify areas of improvement.
- You will be able to increase transparency through Request comments and easy file sharing.

Access



PROCESS ARCHITECT

Process Architect Course

- Certificate
- Self paced learning
- Level: Advanced
- 4-6 Hours to complete
- English

- Requires the Introduction to BPMN and Process Designer Course
- You will learn about development and programming tools to extend the functionality of your automated Processes.
- You will learn technical features in ProcessMaker, such as Calculated Properties, Custom CSS, Data Connectors, Watchers, Vocabularies and Environment Variables.
- After completing this course, you will know how to integrate custom code, Scripts and REST APIs in your processes to maximize their automation potential.

Access

Resources (ProcessMaker U)

- Customer Center Resources
 - Workflow Ethos Functions
 - Ethos APIs

Resources

Workflow Ethos Functions

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Resources (Workflow Ethos Functions)

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Version:
2.1.2

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About Ellucian Workflow



Updated: September 28, 2021

Ellucian Workflow is a cloud-based business process management and workflow solution that empowers you to define and execute business rules outside the application.

Powered by ProcessMaker®, Ellucian Workflow has a web-based form designer with a drag-and-drop interface, allowing you to create robust forms without writing any code. Developers and power users can build a process in the BPMN 2.0-compliant Process Modeler by dragging and dropping process modeling elements.

Ellucian Workflow leverages other parts of the Ellucian Ethos platform. Ellucian Ethos Integration is the central hub for all data and API integration between applications and Ellucian Workflow. The Ellucian Ethos Data Model is the standard for data exchange between applications and Ellucian Workflow.

As an Ellucian Workflow administrator, follow the Workflow documentation on the Ellucian Documentation site to establish and configure the Ellucian Ethos connections.

Read more about how to use the documentation provided by both Ellucian Workflow and ProcessMaker in [About Workflow documentation](#).

Resources (Workflow Ethos Functions)



Ellucian Workflow

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About Ellucian Workflow



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Ellucian Workflow system information

[Ellucian Ethos functions for Ellucian Workflow](#)

Ellucian Workflow system information



Updated: May 16, 2022

Ellucian Workflow operates with the following system configuration.

Component	Version
Ellucian Workflow	2.1.2
ProcessMaker Version	4.2.28
Web Server	nginx/1.20.2
PHP Version	7.4.28

Resources (Workflow Ethos Functions)

Ellucian Workflow System Information

Ellucian Ethos functions for Ellucian Workflow ^

Include STP code token for Ellucian Ethos functions

Response objects v

getDataModel

getDataModelByFilter ←

getDataModelByQuery

createDataModel

updateDataModel

deleteEthosDataModel

deleteDataModel

findUsersByExtendedData

updateExtendedUserData

getExtendedUserData

getUserFromEthos

getSessionToken

Prerequisite

In Ethos Integration, define all data model resources to be accessed from Ellucian Workflow in the resources list of the authoritative source applications.

Instructions

[Banner prerequisite checklist](#) or [Colleague prerequisite checklist](#)

In Ethos Integration, define the Ellucian Workflow applications.

[Add the Workflow application to Ethos Integration \(non-STP\)](#) or [Add Workflow applications to Ethos Integration \(STP\)](#)

In Ellucian Workflow, define the API key for Ellucian Workflow (copied from Ethos Integration) on the Ellucian Ethos Integration Settings page.

[Configure the Ellucian Ethos Integration plugin \(non-STP\)](#) or [Configure the Ellucian Ethos Integration plugin \(STP\)](#)

For STP implementations, set up your STP configuration, which is the series of STP codes and API Key codes for each Workflow application.

Related reference

- [Troubleshoot Workflow error messages](#)

Resources (Workflow Ethos Functions)

Ellucian Workflow

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Filters

Version:
2.1.2

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getDataModel

Updated: September 28, 2021

The `getDataModel` function returns an Ellucian Ethos Data Model resource from Ellucian Ethos Integration as a JSON string as part of an `EthosIntegrationResponseObject`.

Description

```
object getDataModel(string $resource, string $id, mixed $version = 0, string $token = null)
```

`getDataModel` sends a GET request for the Data Model resource and `$id` to Ellucian Ethos Integration to be passed to the authoritative source application.

If you specify the Data Model version, the system sets that version in the request. The system supports integer versions (such as `6`) in addition to semantic version strings (such as `"16.0.0"`).

Note: Some resources support alternate response schema versions (such as `sections-maximum`). To query version 8 of that schema, set `$resource` to `sections` and `$version` to `sections-maximum.v8`. Very few resources have alternate response schemas.

Specify the `$token` parameter depending on your site configuration:

- Single institution (non-STP) implementations: If you specify an Ellucian Ethos session token, the system uses it in the request. Otherwise the system generates a new session token and uses it.
- Shared Technology Platform (STP) implementations: The `$token` parameter is required. This ensures the call is routed to the right sources within your STP environment.

```
$token = $ethos->getSessionToken($STP_code);
```

Parameters

Resources (Workflow Ethos Functions)

- Workflow 2.0 Reference
 - Customer Center Resources
 - Workflow Ethos Functions
 - Ethos APIs

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Ethos APIs

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Resources (Ethos APIs)



Ethos

Ethos Platform



Data Model



Integration



Data Access



Ellucian IQ



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Extend



Identity



Resources (Ethos APIs)



Ellucian Ethos Data Model

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About the Ellucian Ethos Data Model

Updated: February 16, 2022

The Ellucian Ethos Data Model is a single model of all of the concepts in the entire domain of higher education.

Note: You can access the *Release Notes* and the *Ellucian Ethos Data Model* from the Contents pane drop-down.

For Ellucian Ethos Data Model-based APIs, each concept is treated as a separate entity in the model, and the same name is used by both business and technical audiences. The model is expressed in the form of JSON Schema documents that are attached to API Documentation that can be accessed through the [API Catalog](#).

All Ellucian applications and third-party certified partner applications that use the Ethos Data Model-based APIs are required to support the Ellucian Ethos Data Model for system integration purposes.

It is expected that legacy systems must adapt to the Ellucian Ethos Data Model definition and provide reasonable defaults to support existing business logic. Ellucian Ethos Integration will be used to facilitate system integration using the Ellucian Ethos Data Model.

The Ellucian Ethos Data Model identity is established by specifying an ID property following the GUID implementation. A global unique identifier (GUID) is a unique reference to an Ellucian Ethos Data Model object that allows us to uniquely identify that object across the entire Higher Education domain. Ellucian Ethos Data Model definitions are generic, designed to support global requirements, and not limited by an existing Ellucian application. All Ellucian application teams along with certified partners and customers collaborate to define and validate the definition that can be supported by each application.

Resources (Ethos APIs)



Search Results

Academic Programs: academic-programs

[15.2.0 - Banner Ethos Data Model APIs](#) | Also available in:
 [15.1.0 - Banner Ethos Data Model APIs](#)
[15.0.0 - Banner Ethos Data Model APIs](#)
[7.0.0 - Banner Ethos Data Model APIs](#)

The Academic Programs API provides details about the offerings of an institution that represent a combination of courses and requirements leading to a degree, diploma, or certificate for a defined set of majors, minors, or concentrations.

Student Academic Programs: student-academic-programs

[17.0.0 - Banner Ethos Data Model APIs](#) | Also available in:
 [16.0.0 - Banner Ethos Data Model APIs](#)
[7.0.0 - Banner Ethos Data Model APIs](#)

The Student Academic Programs API documents the academic programs in the home institution in which a prospect, applicant, current student or graduate has expressed interest in, or been enrolled. DEPRECATION NOTICE: Versions 6.0, 7.0, 11.0, and 16.0.0 have been deprecated and replaced with v17.0.0 or higher

Student Academic Programs Replacements: student-academic-programs-replacements

The Student Academic Programs Replacements API is used to submit changes of academic program in the home institution in which a student is enrolled. Identification of the academic program the student is exiting and the new academic program the student is entering is required.

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Resources (Ethos APIs)



Banner Ethos Data Model APIs

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API



Academic Programs: academic-programs

Academic Programs: academic-programs



Updated: February 23, 2022

Academic Programs 15.2.0 OAS3

https://resources-admin.elluciancloud.com/bundle/banner_api_academic_programs_15.2.0/page/academic-programs.yaml

An offering by an institution that represents a combination of courses and requirements leading to a degree, diploma, or certificate for a defined set of majors, minors, or concentrations.

Academic programs are defined in Banner Curriculum, Advising and Program Planning Module (CAPP)-SMAPRLE form. This is a program definition form where minimum details of a program are first defined. After a program is defined in SMAPRLE, curriculum rules are used to define the academic programs in use at the institution using the SOACURR form. Rules such as valid majors, minors, concentrations can be defined for that program.

Please refer to "Additional information for the academic-programs API" section in the Banner Ethos API Handbook for details on named query behavior for this API.

Resources (Ethos APIs)

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Forum for Ellucian Workflow

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How to have a link return a Word document?

Ellucian Workflow

by Carl Bowman • created 5m ago

0 replies • 0 views



Design and Configure Ellucian Workflows Training - Register Today!

Ellucian Workflow

by AuRelia Mauldin • created 3h ago

0 comments • 12 views

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Leaderboard

Ellucian Workflow

- Denise Boyter
670 Points
- JS
joe shields
610 Points

Resources (Community Workflow Forum)



Don't automate a problem



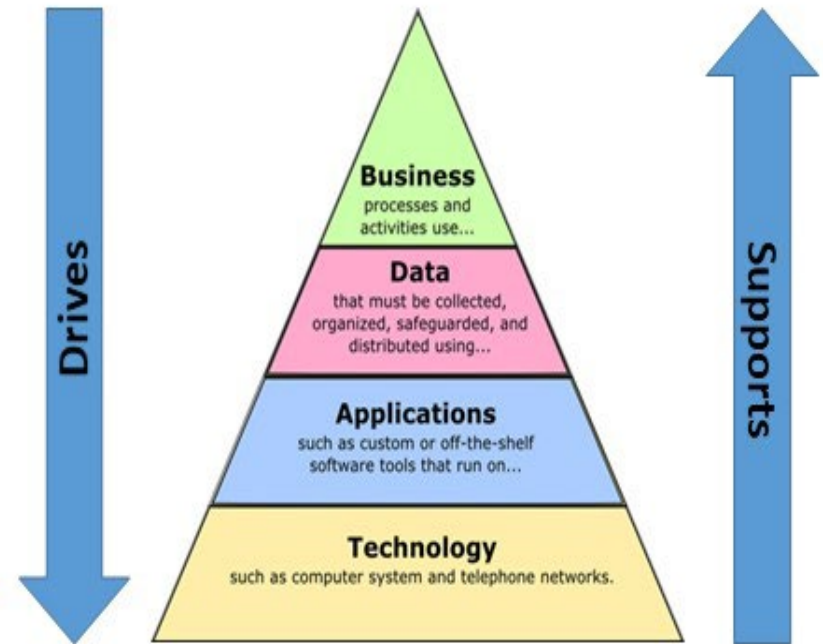
Standardization is hard!



Business Drives Technology



Technology Supports Business Drivers



Lessons Learned



Workflow is a vehicle that moves process steps



Bring campus constituents together



Work to develop a standard, single process for a specific outcome



Identify responsibilities – Map actions

... **Now your ready to build a workflow**

Lessons Learned

Questions? – Thoughts?