



MAXTECH

at



MUWG

MAXIMO UTILITY WORKING GROUP

Spring 2024

POWERED BY  BPD ZENITH

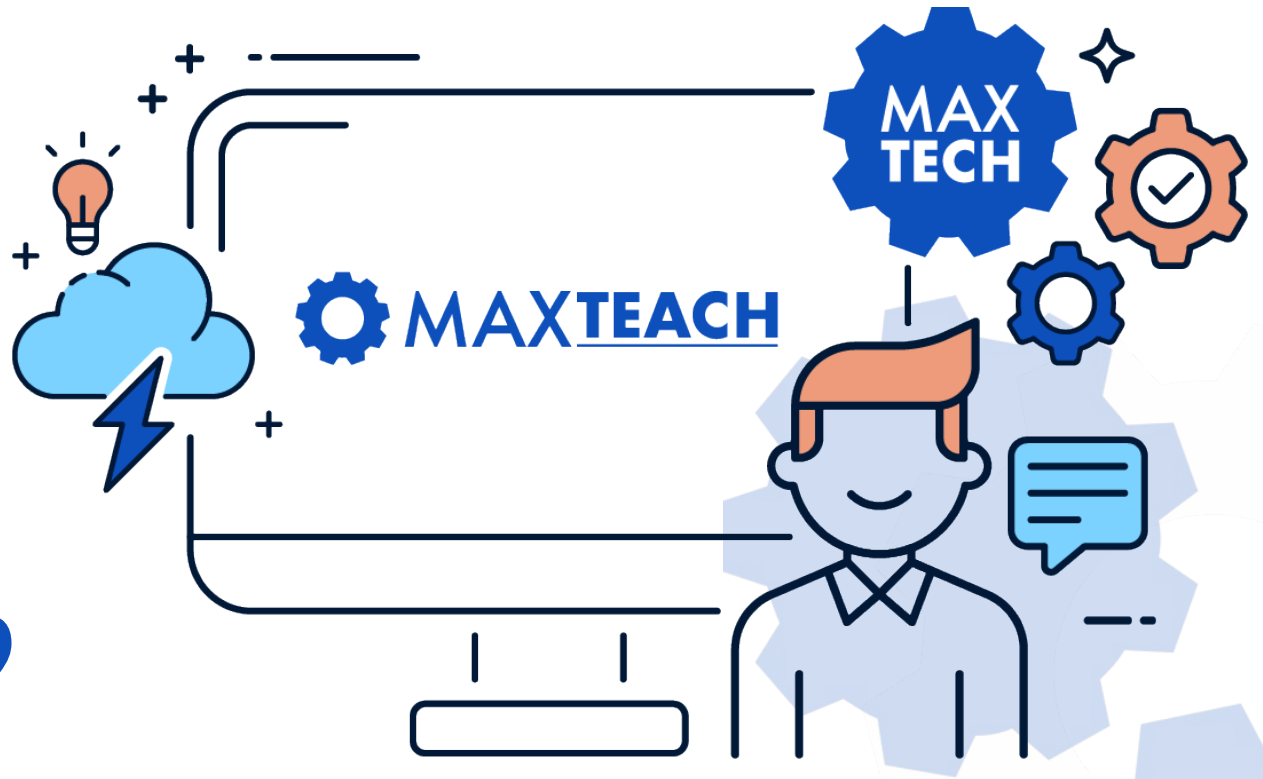
In partnership with



POWERED BY  BPD ZENITH

WHAT IS MAXTECH?

Founded in 2017 by BPD Zenith, MaxTECH is the first ever dedicated Maximo Technical User Group aimed at Maximo Administrators, Developers and Technical Support staff.



About BPD ZENITH

- Established in 1994 – Carlisle, England
- Global operations in North America, Asia Pacific and EMEA
- Leading IBM Global Partner in Maximo & IoT
- Proven provider of fully hosted and supported cloud-based IBM Maximo & AI solutions
- Dedicated Global Infrastructure & Software Support Team
- Experience across multiple asset-intensive industries
- Internal Product Development team who develop and maintain our award-winning industry accelerator templates and add-on solutions





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THE CONFIGURABLE STATUS LIFECYCLE

Jade Warren | Principal Systems Analyst | Great River Energy



“Great things are not done by impulse, but by a series of small things brought together” Vincent Van Gogh

Great River Energy

27 member-owner cooperatives

- 715,000 members
- \$3.9 billion total assets
- \$981 million revenue

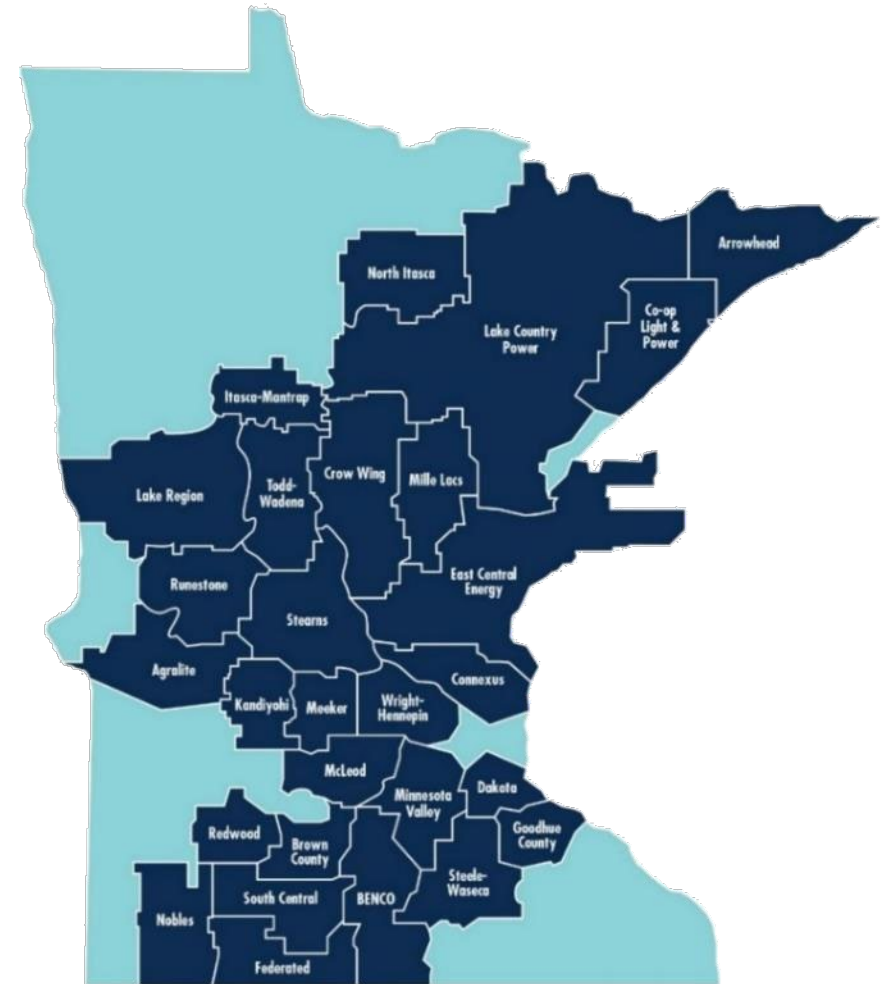
Competitive rates, stable forecast

4,800+ miles of transmission lines

3,000+ MW generation

~300,000 Maximo assets

Maximo 7.6.1.3 on Tivoli13 skin



Agenda

- Process background (2 minutes)
- Maximo architecture
- Application config
- Tying it all together
- Wrap-up / questions



Jade Warren
Principal Systems Analyst

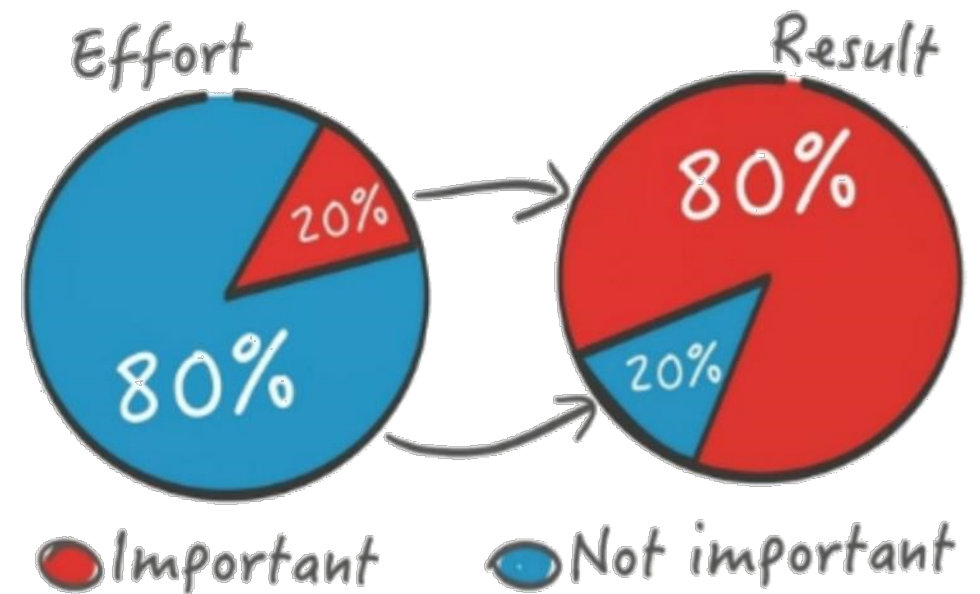
- 19 years Maximo experience
- MUWG Management Committee
- Beekeeper

The Power of Curiosity



Interface Configuration

- Very approachable
- Almost NO risk
- MODERATE to SIGNIFICANT value



The IT Projects “Process”

Such as it was...

IT Projects

RFCs / projects

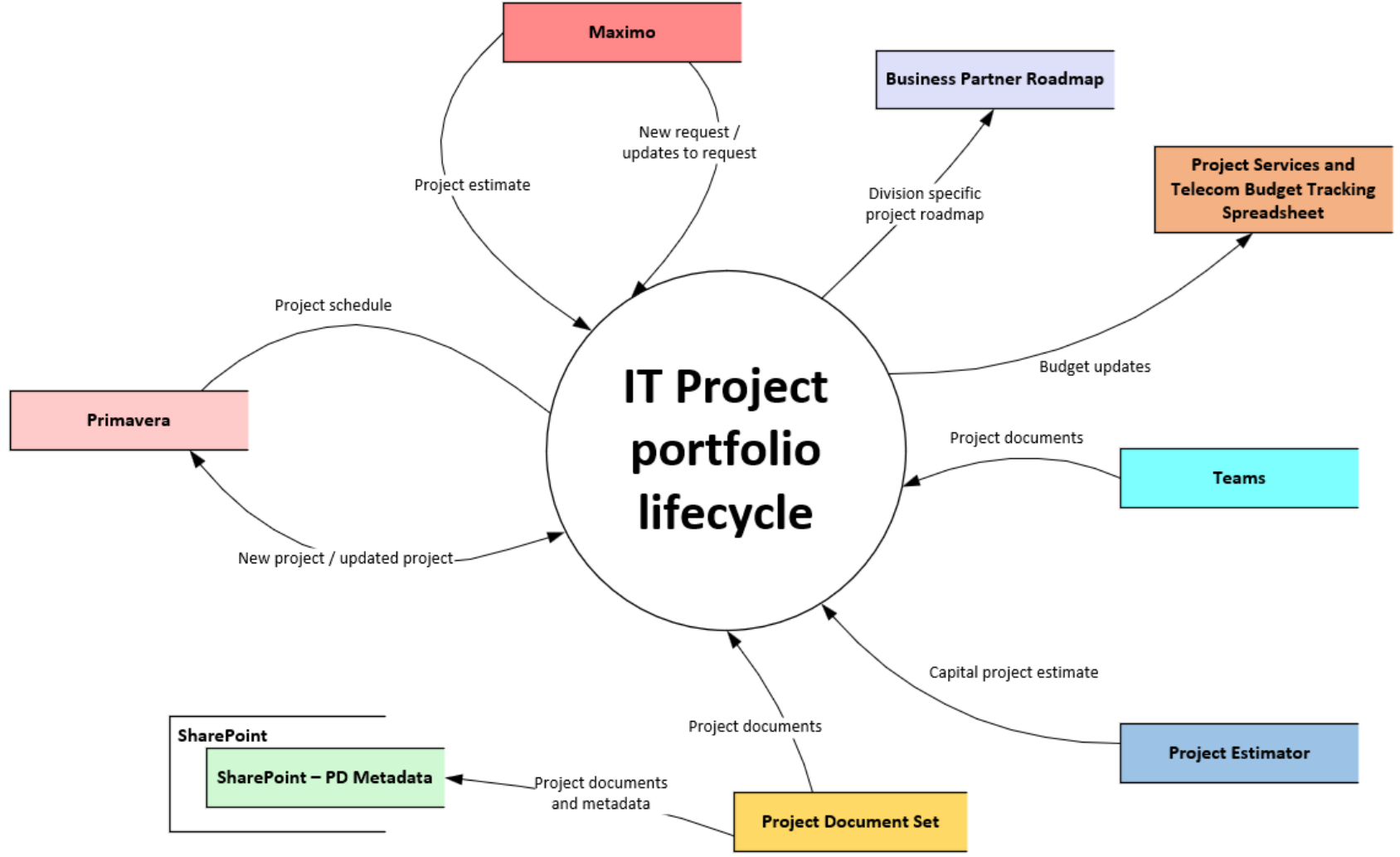
Pipeline

Lifecycle & approvals

Reports

Disconnected data

Data Repositories



Major Impediments

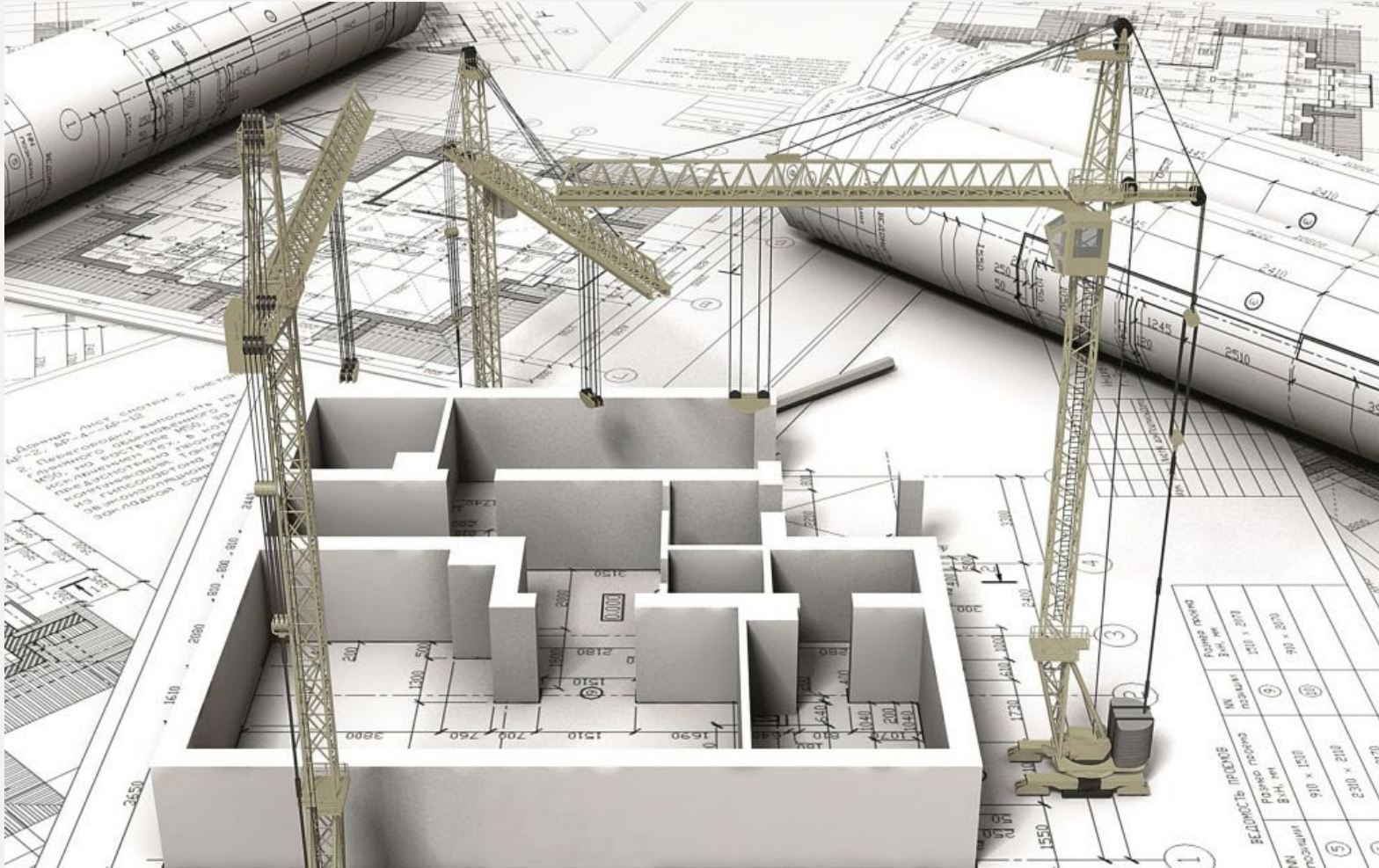
- Word documents & spreadsheets
 - data entry
 - reports
- No enforced lifecycle
- Limited visibility
- No automation
- Disconnected RFCs



MAXIMO ARCHITECTURE

...and so forth

Architectural Decisions



- Tickets
 - Work orders
 - Child tables
- “From scratch”
- Scripting & conditional UI

Supporting Cast

- Escalations
- Communication templates
- Comm log & work log
- Person groups
- Related records
- Solutions
- Auditing



Projects

Projects

“This world is but a canvas to our imagination.” Henry David Thoreau

New Record

The screenshot shows the 'New Record' dialog box in the Maximo application. The dialog is titled 'New Record' and contains the following fields and options:

- RFC:** 274715
- Convert to Project:** Button
- Reporting Class:** [Empty field]
- * Requester:** JWARREN (Warren, Jade GRE-ER)
- * Managed By:** MANGELO (Angelo, Michelle GRE-MG)
- Requested Start:** [Empty field]
- Description:** [Empty text area]
- Details:** [Empty text area]

Instructions at the bottom of the dialog:

- Click **Register Record** to save your record. You can add more detail later before submitting.
- Click **Submit Record** to submit your record for review. The **Details** field is required to submit records. The record will be sent to the designated **Managed by** person for review.

Buttons at the bottom: Register Record, Submit Record, Cancel.

My open work items Find Project Select Action



Resources Reports

List Initiation Definition Execution Related Records Audit History

Project

Project P265562

* Description: IT - IT project portfolio lifecycle

Reporting Class:

* Primavera project ID: 210205 Priority: Medium

Primavera parent ID: Category: Value Add

* Financial Type: O&M Driver: Efficiency Improvement

Responsibility

* Requester: MANGELO Angelo, Michelle GRE-MG

* Project Manager: CEMPSON Empson, Christopher GRE-MG

* Managed By: MANGELO Angelo, Michelle GRE-MG

View Work / Comm Log View Work Orders View Assets

Status

Status: ACTIVE

Reported Date: 9/15/23 14:46

Submitted Date: 9/15/23 14:46

Target Start Date: 5/1/23 00:00

Mandatory Completion Date:

Send E-mail?

Initiation

Quarter: 2023 Q2

Score: 9

T-Shirt Size: 304 to 840 hours

Estimated Cost:

Definition

Hours: 400

Cost (O&M): 0.00

Cost (Capital): 0.00

Total Cost: 0.00

Prior to moving to COMPLETED, complete the following fields:

Actual In-service Date, Ready for financial close date

Refresh post-it note

Request Details Benefits & Consequences Business Roles Scoring IT Resources

Long description of the project including purpose (i.e., What you are planning on doing?). Should be descriptive enough to validate that project is Capital or O&M.

* Details: The project services team completed a current state assessment of our project and RFC process. The goal of the effort is to reduce the number of data-sources used within the process and determine what is the source of truth.

The outcome of the assessment was a working prototype of a Maximo solution which the team and ITL agreed to move forward with.

At this time, network/telecom projects will continue to follow their existing processes and create the project definition within project estimator.

Attachments

* Corporate Strategic Imperative: Competitive

* IT Division Strategic Imperative: Deliver solutions & services

Business Roles

Request Details | Benefits & Consequences | **Business Roles** | Scoring | IT Resources

Business Role(s) Filter > 1 - 6 of 6

Person	Name	Division	Department	Department	Requester?	Resource?	Stakeholder?	Sponsor?	Reviewed?		
CEMPSON	Empson, Christopher GRE-MG	IT	4020	IT Strategy & Projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
DEATHERT	Eatherton, Doralisa	IT	4020	IT Strategy & Projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
LPETERSE	Petersen, Lauri GRE-MG	IT	4020	IT Strategy & Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
MANGELO	Angelo, Michelle GRE-MG	IT	4020	IT Strategy & Projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
JWARREN	Warren, Jade GRE-ER	IT	4030	Information Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
		GRE			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

New Row

External Resource(s) Filter > 0 - 0 of 0

Description	Resource?	Stakeholder?
There are no rows to display.		

New Row

Scoring

Request Details Benefits & Consequences Business Roles **Scoring** IT Resources

Scoring -

Estimated Cost: **** Assessments should be scored assuming the results of an implementation ****

Score Detail [Filter](#) > 1 - 9 of 9 -

Criteria	Score	Score Description	Details / Comments
This meets one or more of the following: resolves a safety-related condition; is required to maintain external compliance mandates; addresses an unacceptable shutdown risk to a generating unit; addresses an unacceptable decline in transmission reliability; is required to meet contractual obligations	<input type="text" value="0"/>	No	<input type="text"/>
This project has a mandatory start or completion date	0	No	
Does the project result in a new business capability or significant new functionality that directly adds value for business users?	1	Yes	
This project will result in a business improvement. BI types include: one-time cost savings; annual cost savings; process improvement; security enhancement; safety enhancement; environmental improvement; revenue enhancement; partners; reliability (G&T)	1	Yes	
This project will reduce risk associated with a business capability and/or process	1	Slight risk reduction	
This project is required to maintain existing functionality, in support, reliable and available to business users	1	Yes	
What is the risk to business users if this project is not done?	0	No anticipated impact	
What is the risk of doing / executing on the project?	2	Low risk; few or no unknowns	
How many stakeholders are directly impacted by this project?	3	GRE enterprise	

IT Resources

Request Details Benefits & Consequences Business Roles Scoring **IT Resources**

Person groups needed on project Filter > 1 - 5 of 5

Supervisor	Person Group	Person Group Name		Named Resource	T-shirt Size	T-shirt Hours			
<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>			
LPETERSE	1095	Business Analysts		DEATHERT	M	41 to 160 hours			
LPETERSE	1011	Project Manager		CEMPSON	M	41 to 160 hours			
LPETERSE	1095	Business Analysts		MANGELO	M	41 to 160 hours			
RISLE	1130	Reporting		JCAMPBEL	S	21 to 40 hours			
RSCHMITZ	1122	Asset Mgmt		JWARREN	L	161 to 320 hours			

IT Leadership Reviews & Approvals Filter > 1 - 10 of 10

Person	Reviewed?	Changed Date	Comments
CLELEUX	<input checked="" type="checkbox"/>	9/15/23 14:54	<input type="text"/>
DVANSYTZ	<input checked="" type="checkbox"/>	9/15/23 14:54	
ERUPP	<input checked="" type="checkbox"/>	9/15/23 14:54	
KSHAFT	<input checked="" type="checkbox"/>	9/15/23 14:54	
LPETERSE	<input checked="" type="checkbox"/>	9/15/23 14:54	

Scope

Request Details | **Scope** | Schedule | Cost | Business Roles | IT Resources

In Scope | Filter > | 1 - 11 of 11

Sequence	Description		
10	Future state process	⊖	🗑️
20	Application security	⊖	🗑️
30	Decommission documents and folders	⊖	🗑️
40	Report definition, Cognos model, creation of report	⊖	🗑️
50	Communications to organization	⊖	🗑️
60	Creation of procedures/help documents	⊖	🗑️
70	Draft and execute test scenarios	⊖	🗑️
80	End User training	⊖	🗑️
90	Solution and data requirements (design and construct)	⊖	🗑️
100	Stakeholder analysis	⊖	🗑️
110	Update existing SharePoint site	⊖	🗑️

New Row

Out of Scope | Filter > | 1 - 6 of 6

Sequence	Description		
10	Changes to project estimator	✅	🗑️
20	Direct integration with Primavera	✅	🗑️
30	Direct integration iwth SharePoint to create project document sets	✅	🗑️
40	Integration with Finance for hour reports	✅	🗑️
50	Network/telecom, Transmission and Power supply project processes	✅	🗑️
60	Standardized list of scope items by type of project (e.g. assessment, implementat	✅	🗑️

New Row

IT Resources (again)

Request Details | Scope | Schedule | Cost | Business Roles | **IT Resources**

Person groups needed on project Filter > 1 - 5 of 5

Supervisor	Person Group	Person Group Name	Named Resource	T-shirt Size	T-shirt Hours	Hours	Target Start	Target Finish			
LPETERSE	1095	Business Analysts	DEATHERT	M	41 to 160 hours	60	9/13/23	12/19/23			
LPETERSE	1011	Project Manager	CEMPSON	M	41 to 160 hours	50	9/13/23	12/19/23			
LPETERSE	1095	Business Analysts	MANGELO	M	41 to 160 hours	60	9/13/23	12/19/23			
RISLE	1130	Reporting	JCAMPBEL	S	21 to 40 hours	30	9/13/23	12/19/23			
RSCHMITZ	1122	Asset Mgmt	JWARREN	L	161 to 320 hours	200	9/13/23	12/19/23			

New Row

Actions / Decisions / Risks

Project Log Decisions Risks Potential BIs Lessons Learned

Actions & Issues [Filter](#) > 1 - 10 of 51

ID	Type	Description	Owner	Due Date	Status				
MP1672697	ACTION	Validate Quarterly plan report1	CEMPSON	10/6/23 10:07	COMP				
MP1672698	ACTION	Primavera Project Date audit report validation	CEMPSON	10/6/23 10:09	COMP				
MP1672723	ACTION	testing action escalation	CEMPSON	10/5/23 08:12	CLOSE				
MP1673083	ACTION	Design - notification templates	MANGELO	10/13/23 11:17	COMP				
MP1673084	ACTION	Cognos model/Report definition	MANGELO	10/13/23 11:25	COMP				
MP1673085	ACTION	Review state transition diagram	MANGELO	12/1/23 00:00	COMP				
MP1673086	ACTION	Construct data requirements	MANGELO	10/31/23 00:00	COMP				
MP1673087	ACTION	Construct solution requirements	MANGELO	10/31/23 00:00	COMP				
MP1673088	ACTION	Construct application security	MANGELO	10/31/23 00:00	COMP				
MP1673090	ACTION	Construct model/reports	MANGELO	10/31/23 00:00	COMP				

ID: MP1672697 * Validate Quarterly plan report1

* Type: ACTION

Priority: 3

Details: See solution requirements for report specification. Add any items into the log in the report spec

Attachments

Result: Report validated

Status

Status: COMP

Date Opened: 10/2/23 10:07

Entered By: MANGELO

Assignment

Owner: CEMPSON

Due Date: 10/6/23 10:07

Comments E-mails

Comments [Filter](#) > 0 - 0 of 0

Comment Date	Created By	Summary
There are no rows to display.		

[New Comment](#)

Application Config

APPLICATION CONFIG

Objective: provide business users with application configuration capabilities

Status-based Requirements

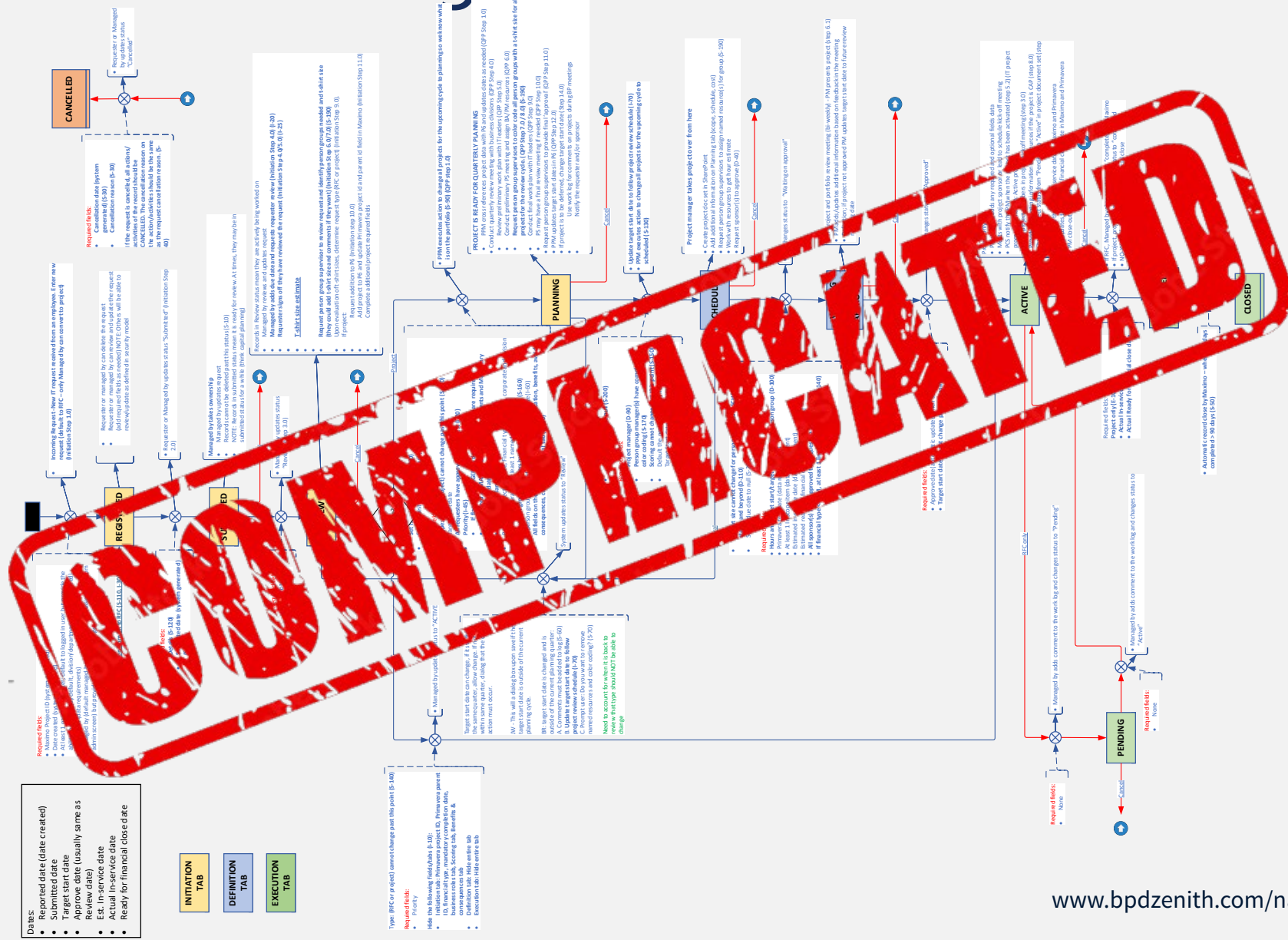
- **Status TRANSITIONS**
 - Prevent certain transitions (always)
 - Apply conditions to other transitions
- **Check requirements** prior to status change
- **Inform the user** of “missing” requirements
- **Provide on-screen help** (“what’s next?”)
- **Update the screen**
 - Conditional status-based rules
 - READ-ONLY and REQUIRED
- **Send e-mails & perform actions** during status change



Status-based Requirements

- Status TRANSITIONS
 - Prevent certain transitions (always)
 - Apply conditions to other transitions
 - Check requirements prior to status change
 - Inform the user of “missing” requirements
 - Provide on-screen “what’s next?” help
 - Update the screen
 - Conditional status-based rules
 - READ-ONLY and REQUIRED
 - Send e-mails & perform actions during status change
- Domain value conditions
 - Attribute-based scripting
 - INIT event scripting
 - Conditional UI
 - Attribute-based scripting

State Transition Diagram



Requirement Cost

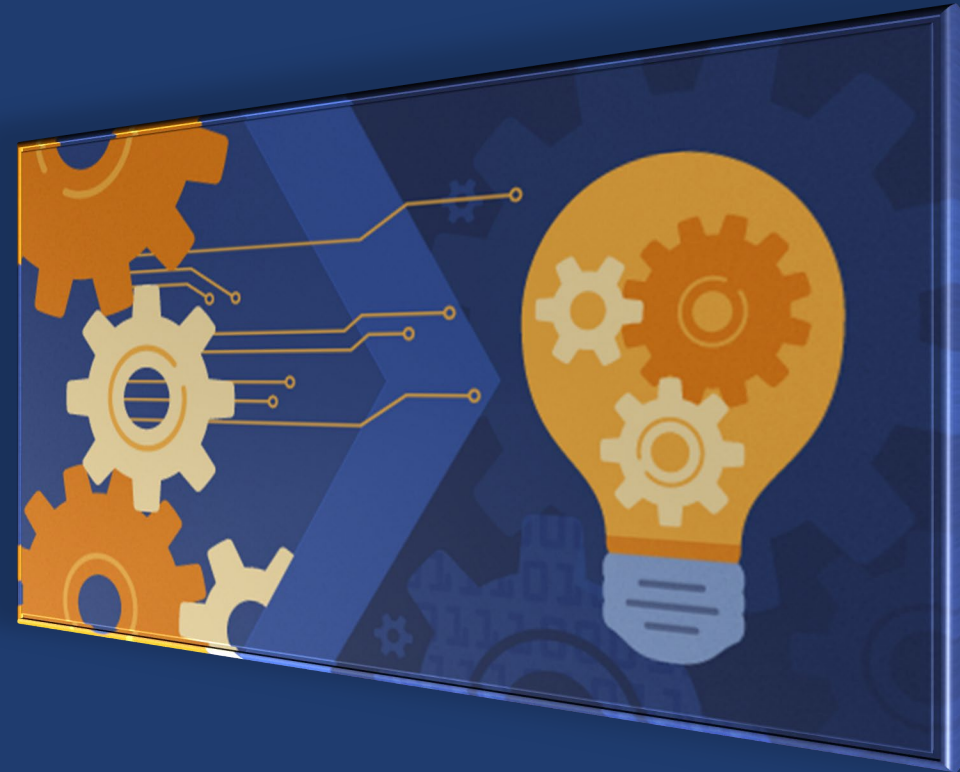


- Each time a new requirement is identified...
 - Update conditions
 - Update status-based scripting
 - Update INIT-based scripting
 - Update conditional UI rules
- Decreased
 - Supportability
 - Agility during development
- Increased RISK



The solution—“Application Config”

- Single screen to store all requirement config
- Hooks into...
 - domain value conditions
 - status-based scripting
 - INIT-based scripting
- Leverages...
 - Conditional expressions
 - Communication templates
 - Actions



Query Find Unique ID Select Action

List Main

Application Configuration Details Status

App: IT Projects & RFCs

Object:

Type Attribute:

Description:

Details:

To-do control IDs: To-do Delimiter:

Map control IDs:

Active?

Changed Date:

Changed By:

Enter control IDs, separated by commas

Status Configuration Application Elements (library)

Application Status Options Filter 1 - 5 of 12

Sequence	Status	Description	Active?	Starting_Status?	Ending_Status?	Allow status if no other rules apply?	Disallowed?	Icon Path
0	ALL	All statuses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1	REGISTERED		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	SUBMITTED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	REVIEW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	PLANNING		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

New Row

Status Transitions Data Requirements Status Communications Status Actions Status Rules

Status Transitions from PLANNING Filter 1 - 3 of 3

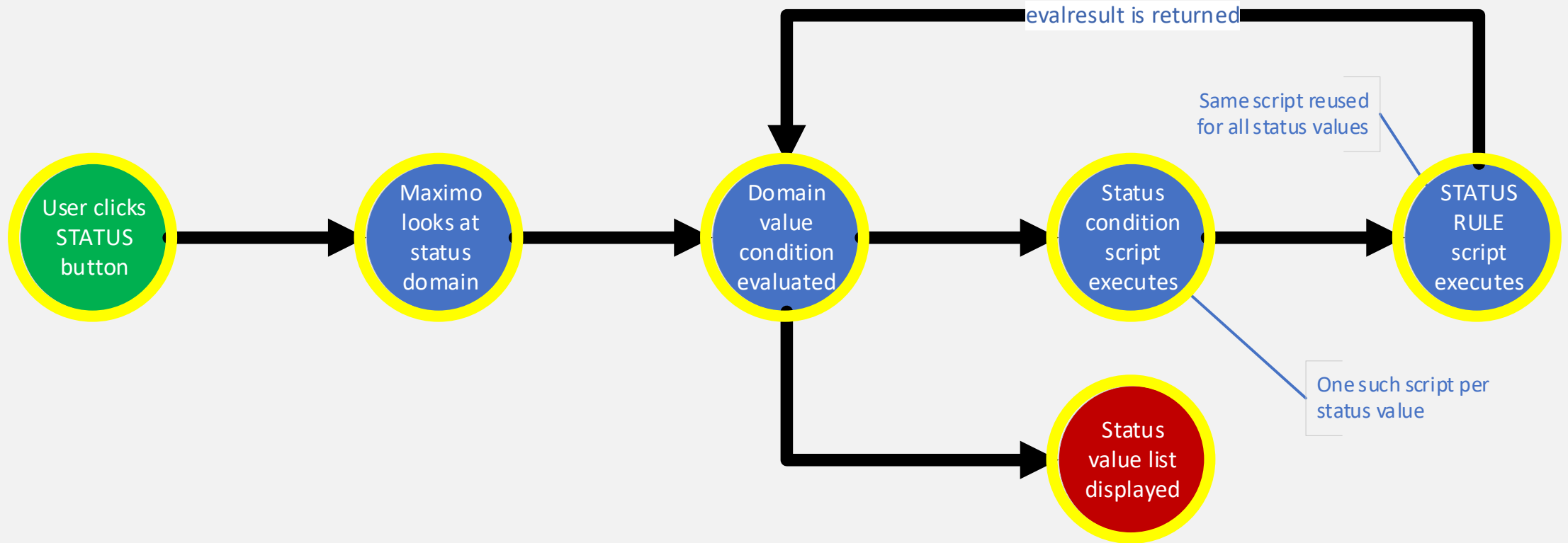
Record Type	Next Status	Happy_Path?	Path	Active?
PROJECT	SCHEDULED	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
PROJECT	CANCELLED	<input type="checkbox"/>		<input checked="" type="checkbox"/>
PROJECT	REVIEW	<input type="checkbox"/>	DEFERRAL	<input checked="" type="checkbox"/>

New Row

The Status Framework

- 1) Define the status values
- 2) Define the transitions
- 3) Make transitions conditional

PRE status change - Logical Flow



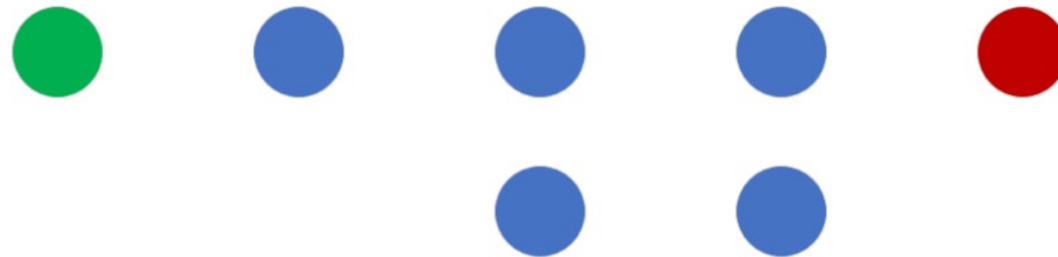
Building the Status Framework

- Add status values from status domain

Application Status Options Filter > 1 - 5 of 12

Sequence	Status	Description	Active?	Starting_Status?	Ending_Status?	Allow status if no other rules apply?	Disallowed?	Icon Path
0	!ALL!	All statuses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1	REGISTERED		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	SUBMITTED		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	REVIEW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	PLANNING		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

New Row



Building the Status Framework

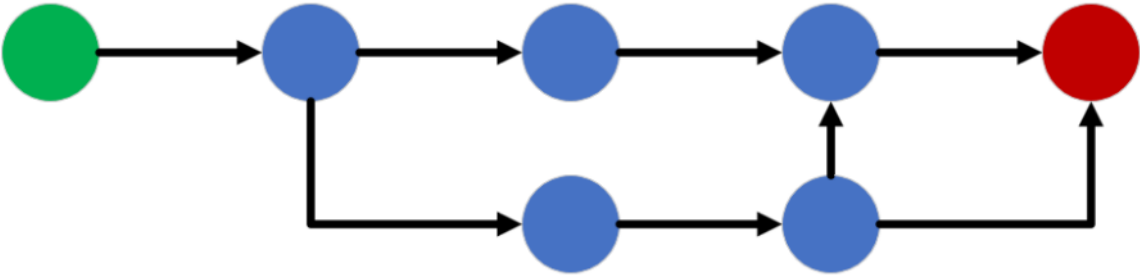
- Define links between status values

Status Transitions from PLANNING

Filter > [Search] [Edit] [Up] [Down] 1 - 3 of 3 [Refresh] [Close]

Record Type	Next Status	Happy Path?	Path	Active?	
PROJECT	SCHEDULED	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	[Trash]
PROJECT	CANCELLED	<input type="checkbox"/>		<input checked="" type="checkbox"/>	[Trash]
PROJECT	REVIEW	<input type="checkbox"/>	DEFERRAL	<input checked="" type="checkbox"/>	[Trash]

New Row



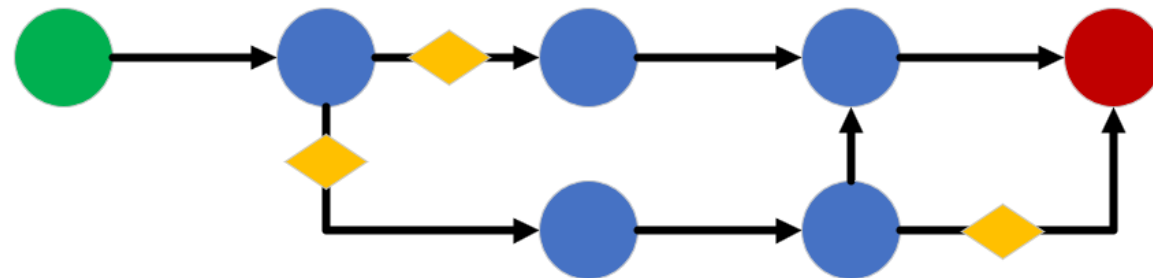
Building the Status Framework

- Add conditions to various status values

Status Rules for ACTIVE Filter 1 - 3 of 3

Record Type	Sequence	Element UID (select)	Not?	Description	Always SHOW status value when?	Always HIDE status value when?	Active?
	1	203	<input type="checkbox"/>	Member of IT Project Portfolio MGMT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2	46	<input type="checkbox"/>	Member of IT Project Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	3	202	<input type="checkbox"/>	Logged-on user is the owner (Managed By)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

New Row



Linking to the Status Domain

- Add conditions w/in the status domain
- Each condition points to an automation script w/a custom condition launch point
- **Eliminates**—
 - Multiple conditions on the status domain
 - VERY CONFUSING SQL

View/Modify Conditions

Domain: SRSTATUS SRSTATUS

Conditions Filter > 1 - 2 of 2

Value ID	Value Description	Object Name	Condition Number
=SRSTATUS PLANNING			
▶ SRSTATUS PLANNING	Planning	IT_PRJ_GRE	ITPR_SR_PL/
▶ SRSTATUS PLANNING	Planning	SR	FALSE

New Row

OK Cancel

Condition: ITPR_SR_PL/ IT Projects - status rule - PLANNING

* Type: CLASS

Expression: ITPR_SR_PLAN:ITPR_SR_PLAN

* Class: com.ibm.tivoli.maximo.script.ScriptCustomCondition

Message ID:

Error message to be displayed when condition not met:

Always Evaluate?

Reference Count: 1

Linking to the Status Domain

- Each conditional status script builds a “hash map”
 - “Type” parameter
 - “Status” parameter
- And invokes the STATUS_RULE script

Automation Script Details

Script: ITPR_SR_PLAN

* IT Projects - status rule - PLANNING

* Script Language: jython

Comments:

```
1 from psdi.server import MXServer;
2 from psdi.mbo import MboConstants;
3 from java.util import HashMap;
4
5 ## get context
6 status = mbo.getString("STATUS");
7 new_status = "PLANNING";
8 v_type = mbo.getString("PROJECT_TYPE");
9
10 ## build hash-map
11 ctx = HashMap();
12 ctx.put("mbo", mbo);
13 ctx.put("status", status);
14 ctx.put("new_status", new_status);
15 ctx.put("v_type", v_type);
16
17 service.invokeScript("STATUS_RULE", ctx);
18
19 evalresult = ctx.get("evalresult");
```

```

1 from psdi.server import MXServer;
2 from psdi.mbo import MboConstants;
3 from java.util import HashMap;
4
5 ## establish context
6 object_name = mbo.getName();
7 person = mbo.getUserInfo().getPersonId();
8 user = mbo.getUserInfo().getUserName();
9 has_rules = False;
10
11 try:    vapp = mbo.getThisMboSet().getParentApp();
12 except: vapp = 'XXX';

```

- Check to see if the status is automatically disallowed
- Check to see if the transition from current to next is allowed
- Check any rules

```

14 ## get the default
15 try:    evalresult = mbo.getMboSet("$DFLT", "STATUS_CYCLE_GRE", "app = '" + vapp + "' AND objectname = '" + object_name + "' AND status = '" + new_status + "' AND active = 1");
16 except: evalresult = True;

```

```

18 ## first determine whether the desired transition is actually even possible...
19 try:
20     trans_set = mbo.getMboSet("$TRANS", "STATUS_TRANS_GRE", "app = '" + vapp + "' AND objectname = '" + object_name + "' AND (record_type = '" + v_type + "' OR record_type = '1')");
21     allowed = False if trans_set.moveFirst() == None else True;
22     has_rules = True;
23 except:
24     allowed = False;
25     evalresult = True;

```

```

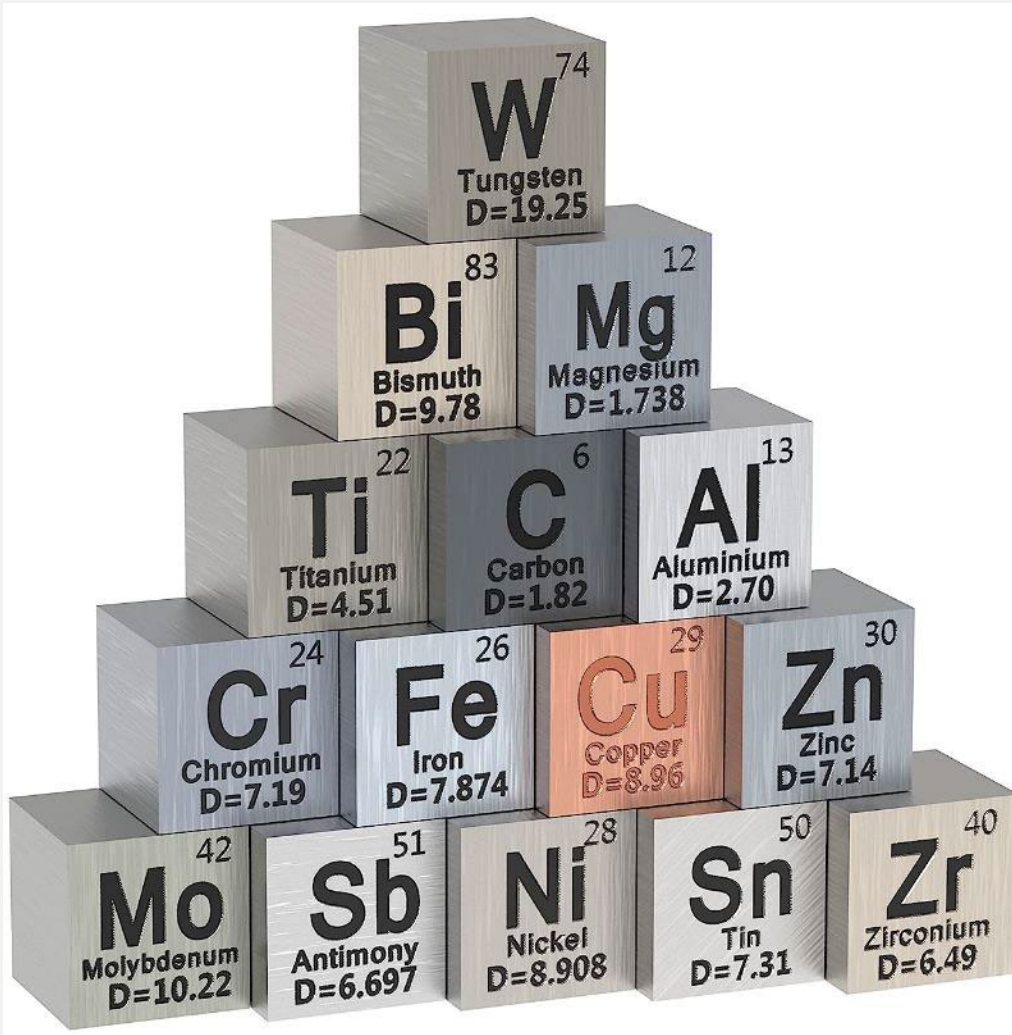
27 ## if the transition is theoretically possible given configuration, then check rules...
28 if (allowed and has_rules):
29     rule_set = mbo.getMboSet("$RULES", "STATUS_COND_GRE", "app = '" + vapp + "' AND objectname = '" + object_name + "' AND status = '" + new_status + "' AND active = 1 AND record_type = '" + v_type + "'");
30     rule_set.setOrderBy("SEQUENCE_GRE");
31     rule_set.reset();
32
33     rule = rule_set.moveFirst();
34     while (rule):
35         NOT = rule.getBoolean("NOT_GRE");
36         SHOW = rule.getBoolean("SHOW_WHEN");
37         HIDE = rule.getBoolean("HIDE_WHEN");
38         c_result = mbo.evaluateCondition(rule.getString("ELEMENT.CONDITIONNUM"));
39         c_result = not c_result if NOT else c_result;
40
41         if (c_result):
42             evalresult = True if SHOW else evalresult;
43             evalresult = False if HIDE else evalresult;
44             break;
45
46         rule = rule_set.moveNext();
47 elif (not has_rules):    evalresult = True;
48 else:    evalresult = False;

```

Rules & Requirements

- 1) Define the elements
- 2) Build the “library”
- 3) Link the elements to status values

Define the elements



- **OBJECTIVE**—make sure it's OK to move to the “next” status
- Two types of tests
- **BASIC**—fields (null or not null)
- **COMPLEX**—conditions
 - State of child tables
 - Various combinations of data
 - Other
- Harvest from state transition diagram

Building the “Library”

- Make configuration easier (pare down lists)
- Allow reusability (labels / prompts)

Status Configuration Application Elements (library)

? Screen elements are defined here for use within status conditions and rules. This is a reusable library. Elements MUST be defined here before they can be applied to configuration rules.

Fields Conditions Screen Elements

Field Elements Filter > 1 - 27 of 27

Relationship	Object	Field	Screen Label	Prompt	Active?
	IT_PRJ_GRE	AVOIDED_CONSEQUENCES	Avoided Consequences	Avoided Consequences	<input checked="" type="checkbox"/>
	IT_PRJ_GRE	BENEFITS	Benefits	Benefits	<input checked="" type="checkbox"/>
	IT_PRJ_GRE	CANCELLATION	Cancellation	Cancellation	<input checked="" type="checkbox"/>
	IT_PRJ_GRE	CORPORATE_IMPERATIVE	Corporate Strategic Imperativ	Corporate Strategic Imperative	<input checked="" type="checkbox"/>
	IT_PRJ_GRE	DESCRIPTION	Description	Description	<input checked="" type="checkbox"/>
	IT_PRJ_GRE	DESCRIPTION_LONGDESCI	Details	Details	<input checked="" type="checkbox"/>

Link elements to status values

[Status Transitions](#)
[Data Requirements](#)
[Status Communications](#)
[Status Actions](#)
[Status Rules](#)

Copy From: [Copy Rules](#) [Clear all requirements and rules for this status](#)

Field Requirements for PLANNING [Filter](#) > [1 - 10 of 13](#)

Record Type	Sequence	Element UID (select)	Element Description	Requirement #	Required?	Read-only?	Hidden?	Not?	Condition (apply when [NOT] TRUE)	Show in to-do (Post-it)?	Active?	
PROJECT	5	20	Target Start Date		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ITPRJ_HDWR >>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	10	14	Division Strategic Imperative		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	11	58	Mandatory Completion Date		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ITPR_MAND_ >>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	12	61	Justification		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	13	62	Benefits		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	14	63	Avoided Consequences		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Other Requirements for PLANNING [Filter](#) > [1 - 5 of 5](#)

Record Type	Sequence	Element UID (select)	Not?	Override Description?	Element Description	Requirement #	Condition (apply when [NOT] TRUE)	Show in to-do (Post-it)?	Active?	
PROJECT	2	49	<input type="checkbox"/>	<input type="checkbox"/>	All requesters have reviewed the request		>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	3	50	<input type="checkbox"/>	<input type="checkbox"/>	Has at least 1 named sponsor		>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	4	51	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Has pending IT leadership reviews		>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	5	82	<input type="checkbox"/>	<input type="checkbox"/>	Scoring has been completed		>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
PROJECT	6	181	<input type="checkbox"/>	<input type="checkbox"/>	All IT resource groups have T-shirt sizes assigned	I-60 -- All person groups needed on project have a T siz	>>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Actions & Communications

Bells & Whistles

Status Transitions | Data Requirements | **Status Communications** | Status Actions | Status Rules

Communcations for PLANNING Filter > 1 - 1 of 1

Record Type	Template	Not?	Condition (apply when [NOT] TRUE)	On status change?	On save?	Active?	Requirement #
PROJECT	ITPRJ_NEWTARGI	<input type="checkbox"/>	ITPRJ_NO30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

New Row

Status Transitions | Data Requirements | Status Communications | **Status Actions** | Status Rules

Actions for PLANNING Filter > 1 - 2 of 2

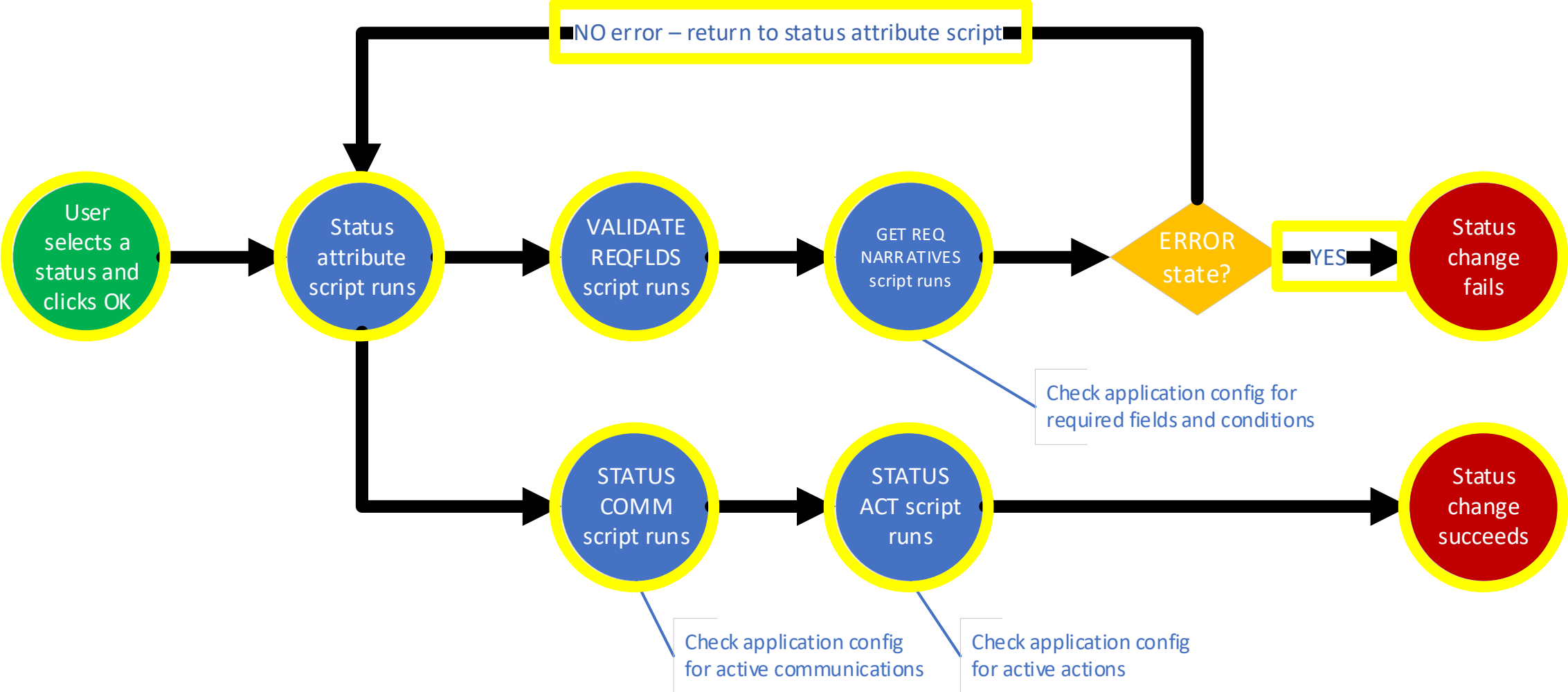
Sequence	Record Type	Action	Not?	Condition (apply when [NOT] TRUE)	On status change?	On save?	Stop here?	Active?	Requirement #
1	PROJECT	ITPRJ_LEAD_DUE	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	S-200 Upon status change (review to planning, planning I
2	PROJECT	ITPRJ_BUS_DUE_	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	I-90 Set requester due date to null when changing status fro

New Row

- “on save” vs “on status change”
- “stop here”
- Conditional

Tying it all together...

POST status change - Logical Flow



“Validate Required Fields” script(s)


- Calls “Get Required Fields Narratives” script
- Optionally throws error

- The “Get Required Fields Narratives” saves duplicate code by fulfilling 3 purposes in one loop:
 - Check for actual requirements (and return an error)
 - Build the error text for status change
 - Build the “to-do” HTML for the on-screen “post-it” note

Validate Required Fields

- If the user ignored the “post-it” note, they get a detailed list of missing items
- Go back to the record, update, then try again

System Message

 BMXAA4295E - Could not change ticket 273129 status to PLANNING.
BMXAA8967E -

The following fields are required in **PLANNING** status:

- Primavera Project ID**
- Corporate Strategic Imperative**
- Division Strategic Imperative**
- Benefits**
- Avoided Consequences**
- Cancellation**
- Risks**

The following conditions must satisfied in **PLANNING** status:

- * All requesters have reviewed the request
- * All IT leaders have reviewed and approved
- * All IT resource groups have T-shirt sizes assigned

OK

The on-screen “post-it” & requirements (including read-only)

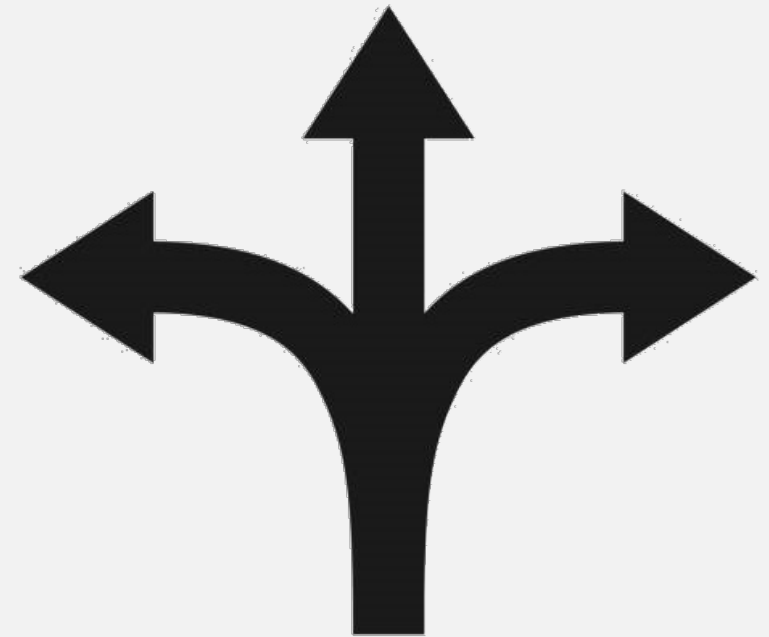
Maximo Screens are NOT user-friendly

The screenshot displays the 'Work Order Tracking' interface in Maximo. The top navigation bar includes a home icon, a menu icon, and the title 'Work Order Tracking'. Below this is a search bar with 'Query' and 'Find Work Order' options, and a 'Select Action' dropdown. A secondary navigation bar contains tabs for 'List', 'Work Order', 'Plans', 'Assignments', 'Related Records', 'Actuals', 'Safety Plan', 'Log', 'Failure Reporting', 'Specifications', 'Service Address', and 'Map'. The main content area is divided into several sections: 'Work Order' details (NEWTECH), 'Asset' details (ORE), 'Class' details (WVOR/OREF), and 'Job Details'. The 'Job Details' section includes fields for Job Plan, Job Plan Revision #, PM, Safety Plan, Contract, Inspection Form, and Inspection Result. The 'Address Information' section includes Service Address, Formatted Address, Street Address, City, and State/Province. The 'Multiple Assets, Locations and CIs' section shows a table with columns for Asset, Location, Configuration Item, Target Description, Sequence, Mark Progress?, Inspection Form, Inspection Result, Site, and Total Work Units. The 'Scheduling Information' section includes Target Start, Target Finish, Scheduled Start, Scheduled Finish, Start No Earlier Than, and Finish No Later Than. The 'Follow-up Work' section includes Originating Record, Originating Record Class, Has Follow-up Work?, Interruptible?, and Is Milestone?. The 'Responsibility' section includes Reported By (MANGELO), Reported Date (12/19/22 1:49 PM), On Behalf Of, Supervisor, Crew, Lead, Work Group, Vendor, and Crew Work Group.

- MANY unused fields
- OOTB groupings don't match business use
- Multiple child tables & tabs
- By trying to meet everyone's needs...
 - They meet no one's needs...
- **“What do I do next?”**

Conditional UI - challenges

- Separate SIG options for each condition group
- Have to edit in application designer
- Sequencing can be confusing / contradictory
- **NOT END-USER CONFIGURABLE!!!**



The solution—“Application Config”

- Use the same requirements for status change
 - Fields
 - Conditions
- Build HTML to display on the screen (“checklist”)
- Update on each save to show progress
- Set field flags for required and read only

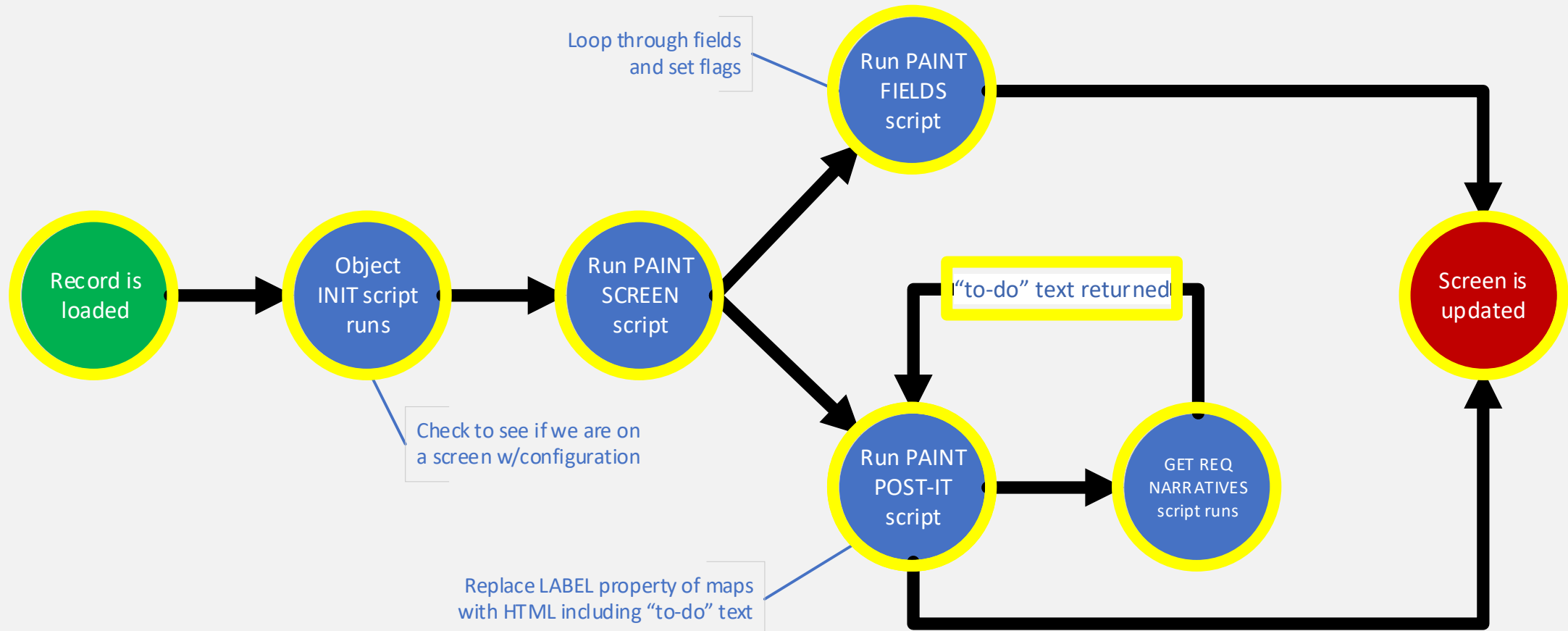
Prior to moving to **PLANNING**, complete the following fields:

~~Target Start Date~~, Primavera Project ID, ~~Financial Type~~, ~~Category~~, Corporate Strategic Imperative, Division Strategic Imperative, ~~Mandatory Completion Date~~, ~~Justification~~, Benefits, Avoided Consequences, Cancellation, Risks

Prior to moving to **PLANNING** ensure the that the following requirements are met:

- All requesters have reviewed the request
- ~~Has at least 1 named sponsor~~
- All IT leaders have reviewed and approved
- ~~Scoring has been completed~~
- All IT resource groups have T-shirt sizes assigned

Painting Screen – Logical Flow



Paint the Post-It Note

```
21 ## call the script to get our narrative
22 ## build hash-map
23 ctx = HashMap();
24 ctx.put("mbo", mbo);
25 ctx.put("v_type", v_type);
26 ctx.put("status", status);
27 ctx.put("object_name", object_name);
28 ctx.put("vapp", vapp);
29
30 service.invokeScript("GET_REQ_NARRATIVES", ctx);
31
32 ## get our returns
33 to_do_text = ctx.get("to_do_text");
34
35 ## finalize the post-it
36 to_do = "




```

Paint the Fields

```
17 ~
18 try:
19     SQL = "objectname = '" + object_name + "' AND app = '" + vapp + "' AND active = 1 AND (record_type = '" +
20         v_type + "' OR record_type IS NULL) AND status IN ('" + status + "', '!ALL!');"
21     req_set = mbo.getMboSet("$REQ", "STATUS_COND_GRE", SQL)
22
23     ## loop through conditional rules
24     req = req_set.moveFirst();
25     to_do = "";
26
27     while (req):
28         f = req.getString("ELEMENT.ATTRIBUTENAME");
29
30         has_condition = not req.isNull("CONDITIONNUM");
31         if (has_condition): c_result = mbo.evaluateCondition(req.getString("CONDITIONNUM"));
32         else: c_result = True;
33
34         NOT = req.getBoolean("NOT_GRE");
35         c_result = not c_result if NOT else c_result;
36
37         if (f != "" and c_result):
38             if (req.getBoolean("HIDDEN")): mbo.setFieldFlag(f, MboConstants.HIDDEN, True);
39             if (req.getBoolean("READONLY")): mbo.setFieldFlag(f, MboConstants.READONLY, True);
40             if (req.getBoolean("REQUIRED")):
41                 mbo.setFieldFlag(f, MboConstants.REQUIRED, True);
42                 if (mbo.isNull(f)):
43                     to_do = to_do + " " + req.getString("ELEMENT.ATTRIBUTETITLE");
44
45     req = req_set.moveNext();
46 except: x = 1;
47
48 if (to_do != ""): mbo.setValue("CURRENT_NP", to_do, 11L);
```

DEMO

OTHER FUN THINGS...

Maybe in another session...

- **Auditing**—the RIGHT way
- **Scripting tricks**—making the screen great
- **Application designer**—breakout session ###
- **Admin configuration**—shift left to power users
- **Dynamic(ish) communication templates**—make outgoing e-mails truly useful

QUESTIONS?



Jade Warren

Principal Systems Analyst |  GREAT RIVER ENERGY.



<< Connect with Jade on LinkedIn