



Managing Your MicroStation WorkSpaces in ProjectWise

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Topics

- MicroStation Configuration Architecture Review
- New Managed WorkSpace formula
- WorkSet Design
- Optimization



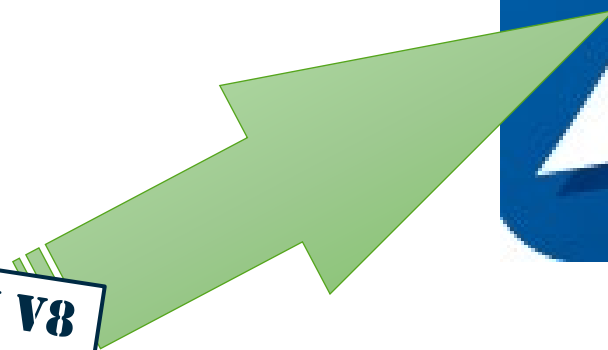
MicroStation Configuration Architecture

What is new in MicroStation CONNECT Edition?

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Workspace → Configuration Set Changes

- New Vocabulary
- New Processing Levels
- Named Processing Levels
- WorkSet Centric
 - Not Always a Project
 - Associated Design Files



MicroStation V8i Workspace Levels



%level0

System CFG Files

%level1

Application CFG

%level2

Site CFG

%level3

PCF
(_USTN_PROJECTCFG)

%level4

UCF
(_USTN_USERCFG)

SETUP AND CONFIGURATION *
CONFIGURATION FILES AND
CONFIGURATIONS SETTINGS BLOCKS

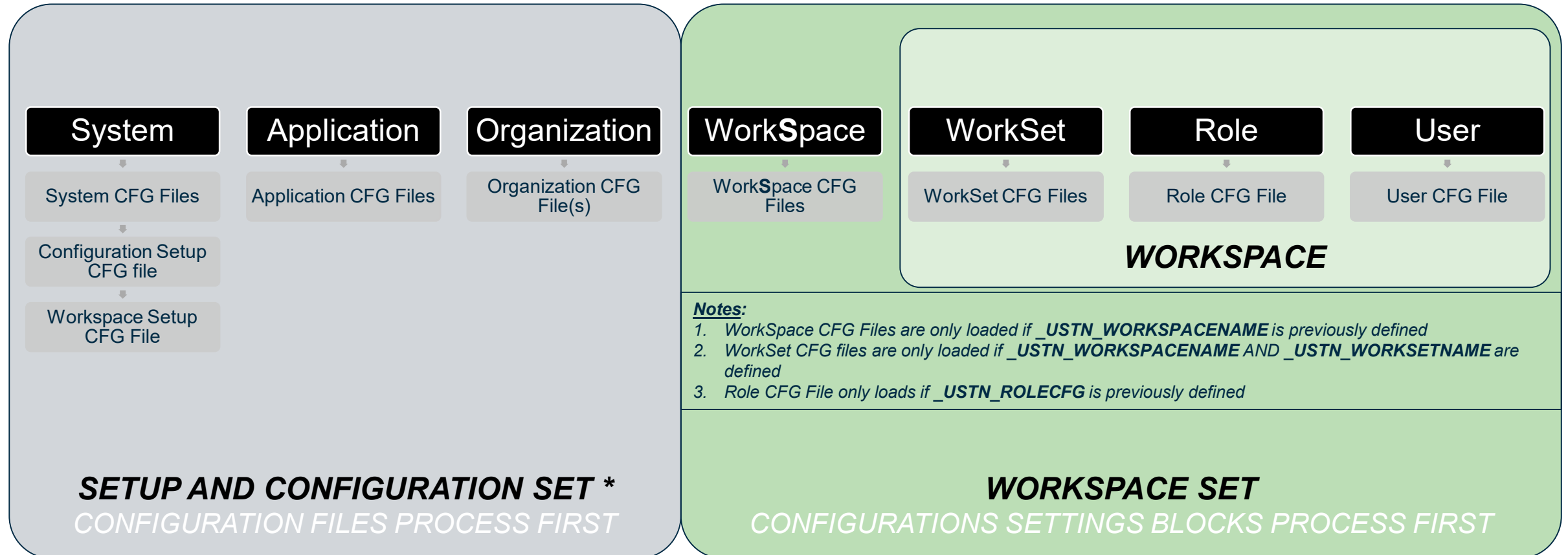
WORKSPACE CONFIGURATION
DRIVEN BY PCF AND UCF

Notes:

1. MicroStation includes a specific PCF and/or a specific UCF if it is defined prior to %level3 and %level4, respectively.
2. `_USTN_PROJECTCFG =`
`${_USTN_PROJECT}${_USTN_PROJECTNAME}.`
`pcf`
3. `_USTN_USERCFG =`
`${_USTN_USER}${_USTN_USERNAME}.ucf`
4. Default
`${_USTN_USER}${_USTN_USERNAME}.ucf`

** Same processing for V8i and CONNECT Edition*

Configuration Levels for MicroStation CONNECT Edition

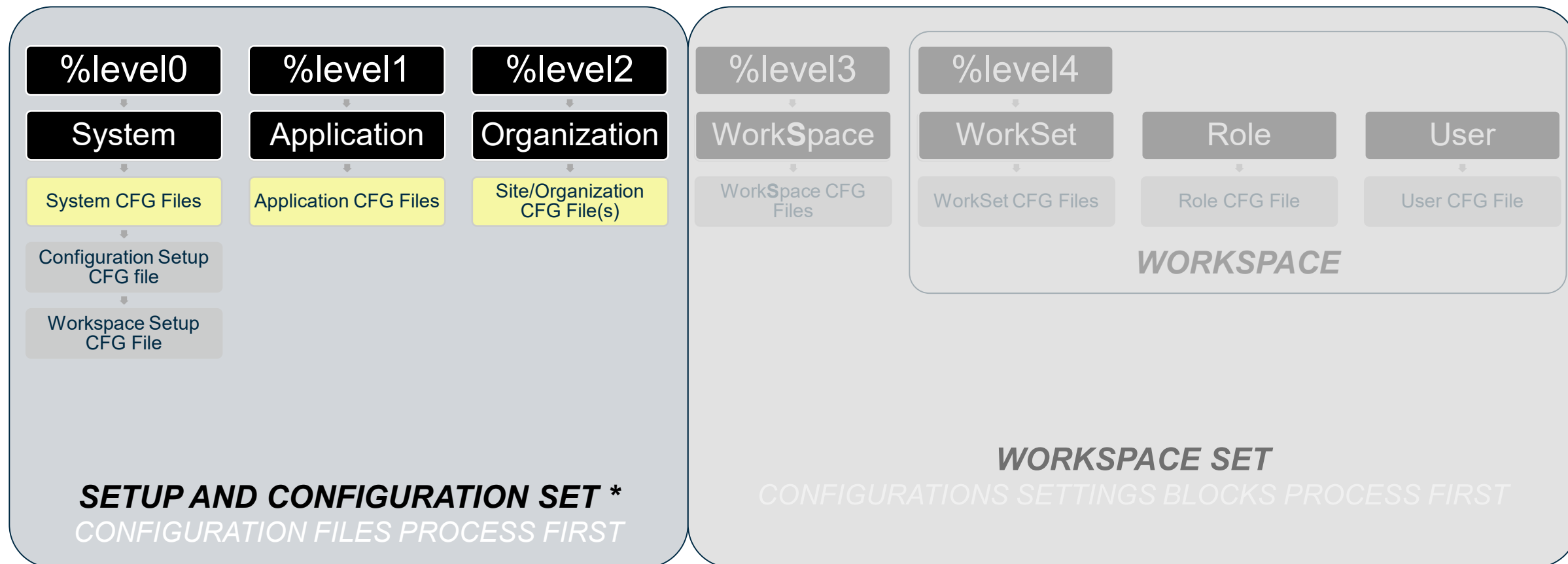


* Same processing for V8i and CONNECT Edition

Common Configuration Levels
















**MICROSTATION V8I AND
MICROSTATION CE**



** Same processing for V8i and CONNECT Edition*

New Look



- ▲  WorkSpaces
 - ▲  Managed
 -  Predefined
 -  Global
 -  Application
 -  Customer
 -  Organization/Site
 -  WorkSpace
 -  WorkSet/Project
 -  Role
 -  User
 -  Variables to exclude from copy-out
 -  WorkSpace profiles



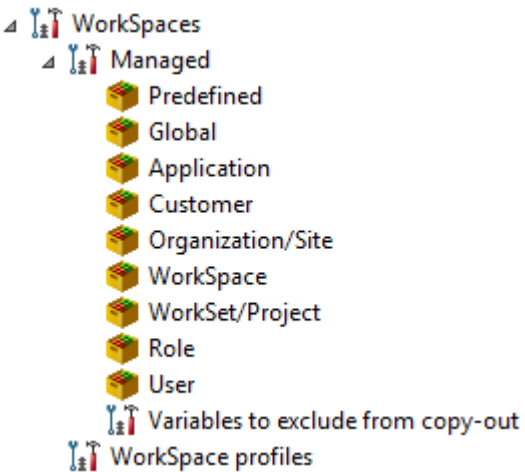
ProjectWise
Design Integration

CONNECT
Edition 2.0
and up



Managed Workspace Levels vs. MicroStation Levels

ProjectWise CSB Type	MicroStation V8i	MicroStation CONNECT Edition
Predefined		%level System
Global	%level 0	%level System
Application	%level 1	%level Application
Customer	%level 2	%level Organization
Organization/Site	%level 2	%level Organization
WorkSpace	%level 4	%level WorkSpace
WorkSet/Project		%level WorkSet
Role	%level 3	%level Role
User	%level 4	%level User



**PROJECTWISE
MANAGED WORKSPACE**

**PROJECTWISE MANAGED
CONFIGURATION**






Managed Workspace vs. Configuration Processing Order

MicroStation V8i Level	ProjectWise CSB Level
%level 0	Global Predefined
%level 1	Application
%level 2	Customer Organization/Site
%level 3	Role WorkSet/Project
%level 4	User Workspace



**PROJECTWISE MANAGED
WORKSPACE**

MicroStation CE Level	ProjectWise CSB Level
%level System	Global Predefined
%level Application	Application
%level Organization	Customer Organization/Site
%level WorkSpace	Workspace
%level WorkSet	WorkSet/Project
%level Role	Role
%level User	User

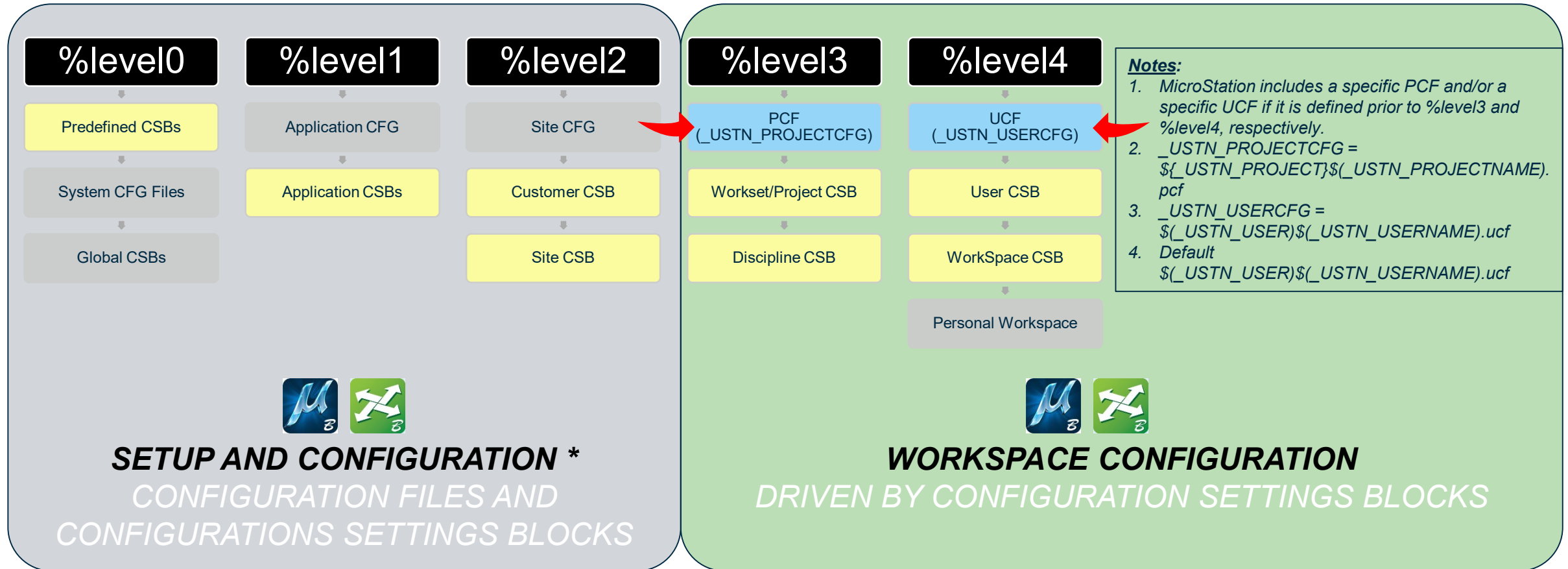


**PROJECTWISE MANAGED
CONFIGURATION**

ProjectWise Managed *Workspace* Levels (MicroStation V8i)



**PROJECTWISE MANAGED
WORKSPACES**

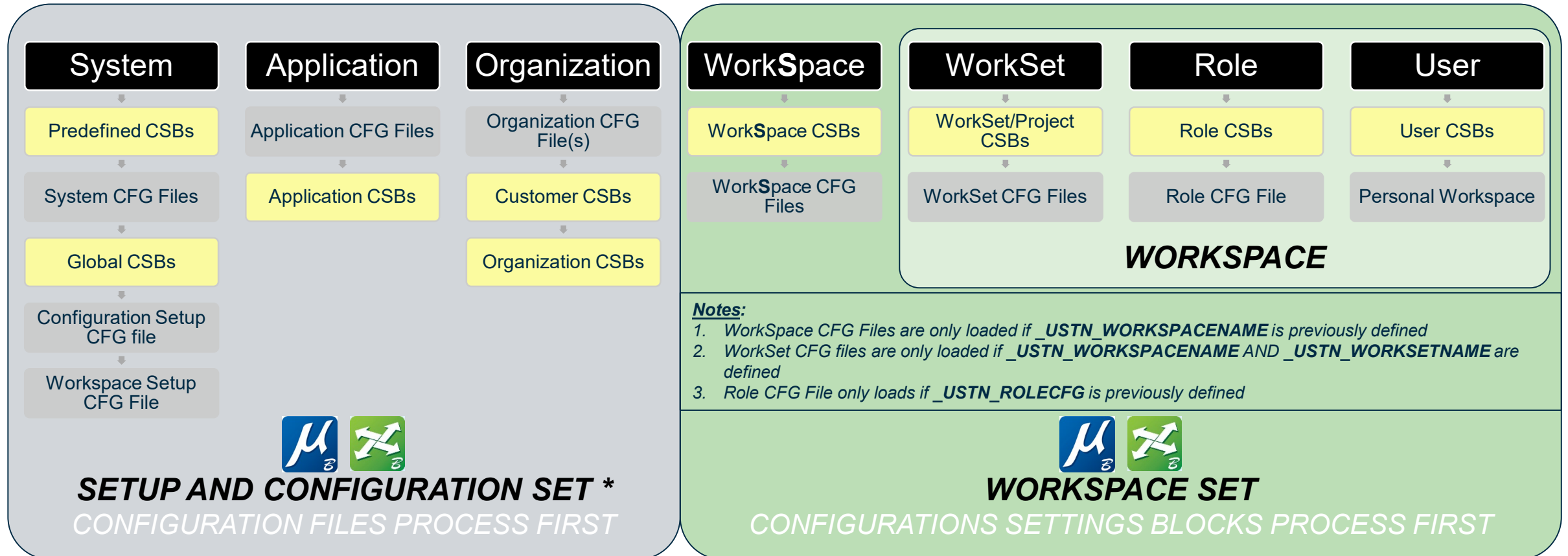


* Same processing for V8i and CONNECT Edition

ProjectWise Managed **Configuration** Levels (MicroStation CONNECT Edition)

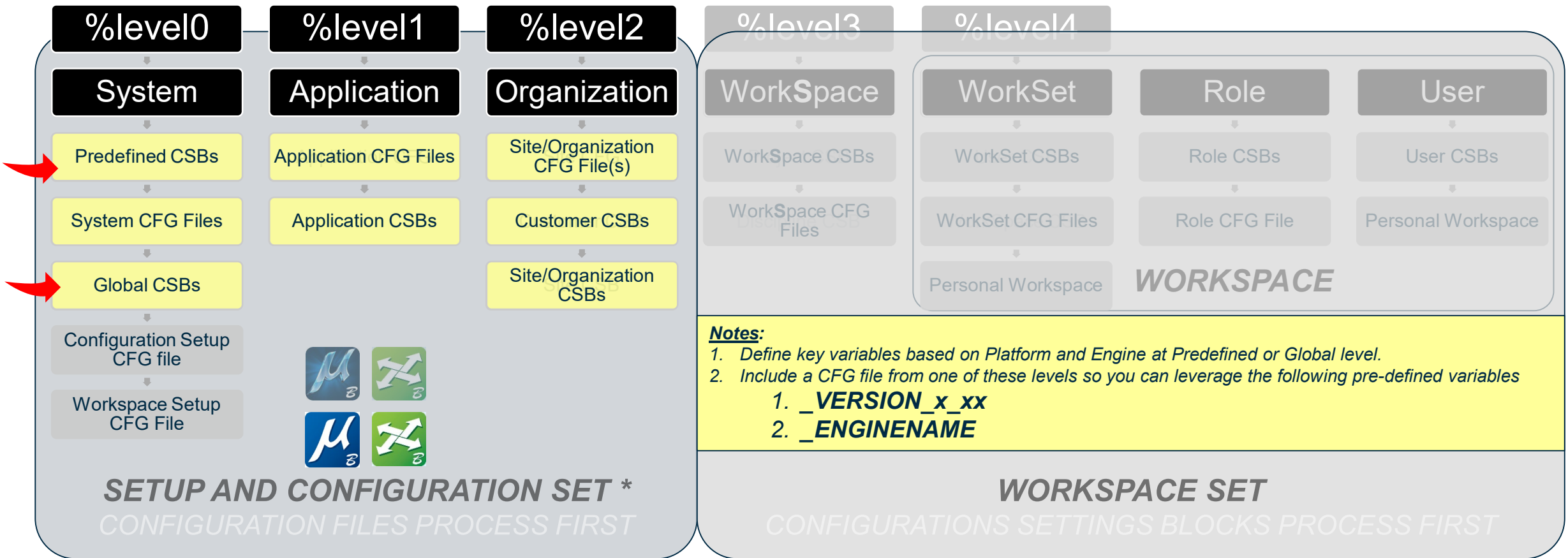


**PROJECTWISE MANAGED
CONFIGURATIONS**



* Same processing for V8i and CONNECT Edition

ProjectWise Managed Workspace/Configuration Common Levels



* Same processing for V8i and CONNECT Edition



New Managed WorkSpace Formula

Minimize CSBs, Maximize Flexibility

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New Managed WorkSpace formula

- Utilize Default Variables
- Use one CFG file to set up Configuration Shell
- Define appropriate variables to include key CFG files



Variable	V8i Examples	CE Examples
<code>_VERSION_X_XX</code>	<code>_VERSION_8_11</code>	<code>_VERSION_10_00</code>
<code>_ENGINENAME</code>	<ul style="list-style-type: none">• MicroStation• PowerGEOPAK• PowerInRoads	<ul style="list-style-type: none">• MicroStation• OpenRoadsDesigner• OpenCitiesMap• AECOsimBuildingDesigner


```
61 #-----
62 # Predefined Configuration Variables:
63 # The following variables are predefined:
64 #
65 #   _ROOTDIR           Set to the directory in which MicroStation is installed.
66 #   _VERSION_x_xx      The _VERSION followed by the current major and minor version, defined but has no value.
67 #   _ENGINENAME        Set to the name of the product.
68 #   _USTN_LocalUserAppDataPath The directory that serves as a common repository for application-specific data that is used by the current, non-roaming user
69 #   _USTN_LocalUserTempPath   The Bentley subdirectory of the directory specified by the TEMP environment variable.
70 #   _USTN_UserAppDataPath     The directory that serves as a common repository for application-specific data for the current roaming user.
71 #   _USTN_CommonAppDataPath   The directory that serves as a common repository for application-specific data that is used by all users.
72 #-----
73
```


** Predefined definitions are found in the MSCE version of msconfig.cfg.*



Managed WorkSpace Recipe

Ingredients



 1 Predefined CSB

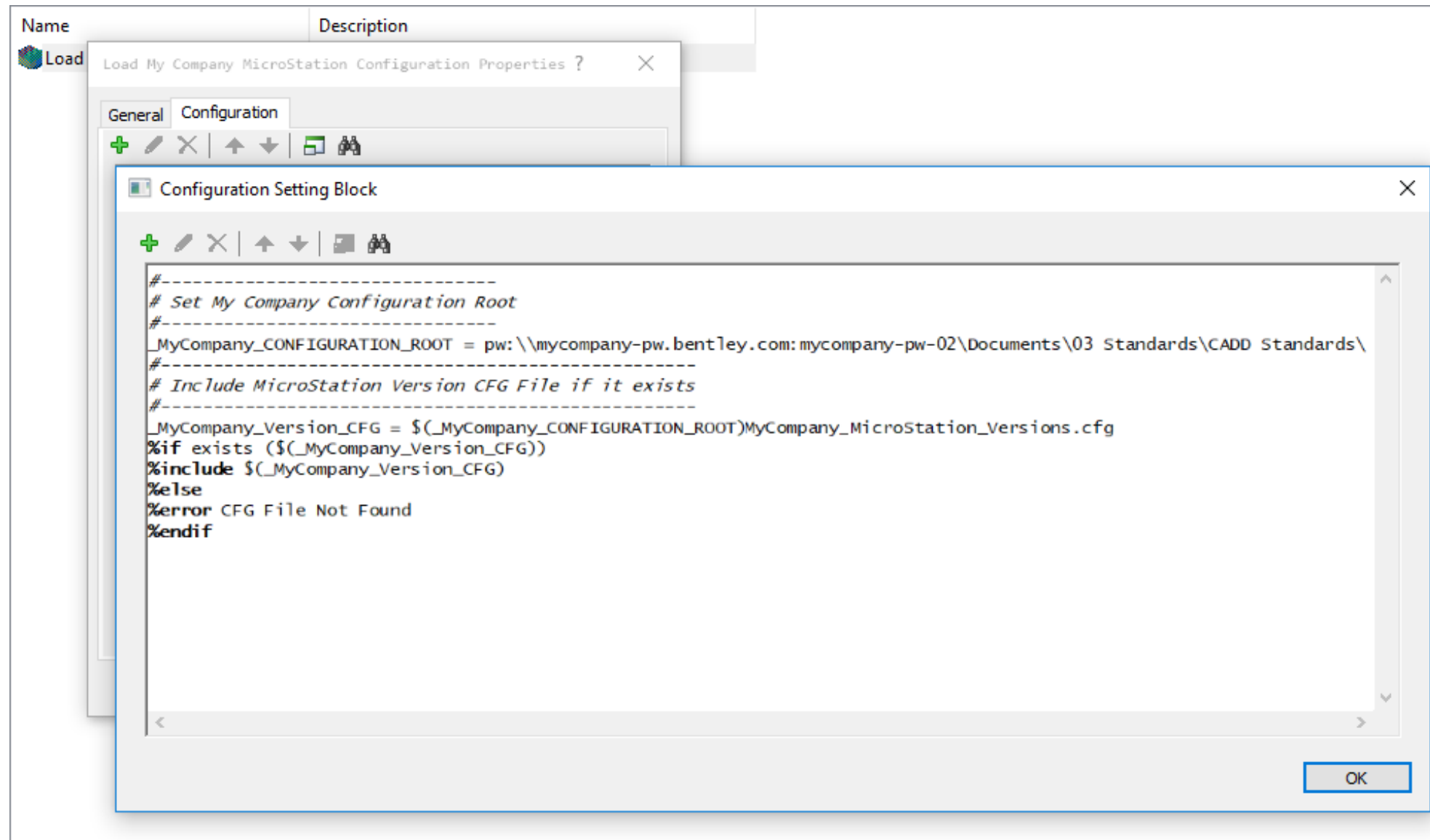
 1 Configuration File

Load My Company MicroStation Configuration



MicroStation_Versions.cfg



<i>Managed WorkSpace Recipe</i>	
<i>Ingredients</i>	
	1 Predefined CSB
	1 Configuration File
<i>Instructions</i>	
1. Set up root configuration path in CSB	
2. Include CFG File from CSB	

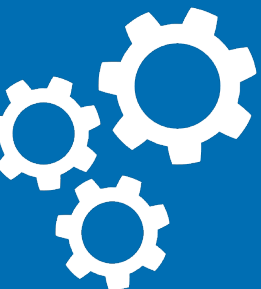




<i>Managed Workspace Recipe</i>	
<i>Ingredients</i>	
	1 Predefined CSB
	1 Configuration File
<i>Instructions</i>	
	1. Set up root configuration path in CSB
	2. Include CFG File from CSB
	3. Set key variables based on <code>_VERSION_x_xx</code> that trigger CFG files to be included





CASE 1 MicroStation CONNECT Edition

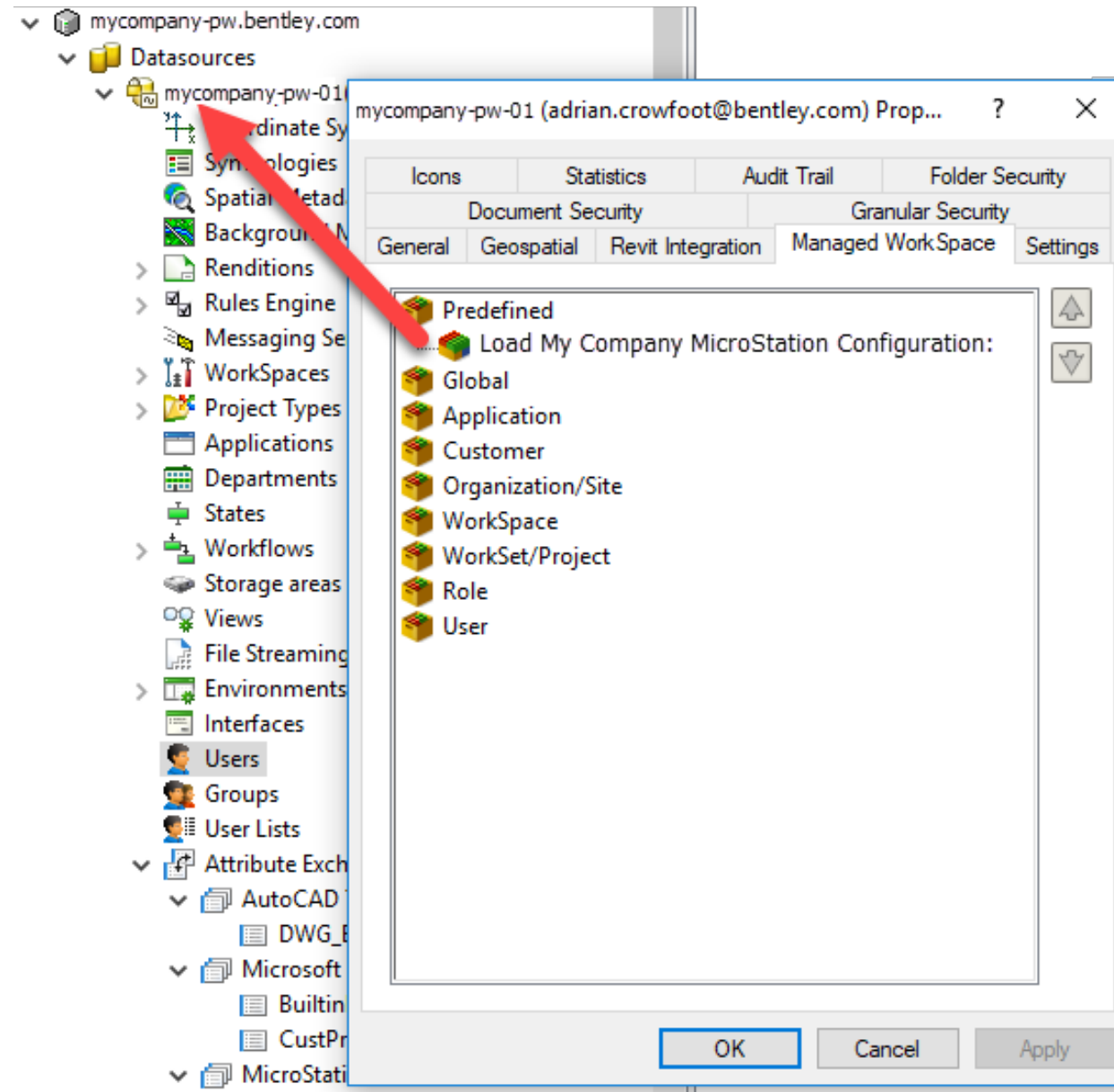


CASE 2 MicroStation V8i

```
1 #####
2 #
3 # Available Variables that were defined in the MicroStation application command line or CSBs
4 #
5 # PW Application      Variable      Value
6 #
7 # CSB Block          Level        Variable      Value
8 # Load My Company MicroStation Configuration  Pre-defined  _MyCompany_CONFIGURATION_ROOT  @:\03 Standards\CADD Standards\
9 #
10 #####
11
12 # If user is running MicroStation CE, use the Workspace Level to load Client standards
13 # MicroStation will load all CFG files in _USTN_ORGANIZATION during %level Organization
14 %if defined (_VERSION_10_0)
15     MYCOMPANY_MICROSTATION_CONFIGURATION_TYPE = CONNECT Edition
16     _USTN_CONFIGURATION = $(_MyCompany_CONFIGURATION_ROOT)MicroStation CE/Configuration/
17 %lock _USTN_CONFIGURATION
18
19 # If user is running MicroStation V8i, set the appropriate variables to load V8i CADD standards.
20 # Configure variables needed to be in place before running system level CFG Files
21 %elif defined (_VERSION_8_11)
22     MYCOMPANY_MICROSTATION_CONFIGURATION_TYPE = V8i
23
24     # Set the path for the V8i Workspace relative to the _MyCompany_CONFIGURATION_ROOT
25     _MYCOMPANY_PW_V8i_WORKSPACEPATH = $(_MyCompany_CONFIGURATION_ROOT)MicroStation V8i/Workspace/
26
27     # Set the appropriate variable location(s) in ProjectWise using $(_MYCOMPANY_PW_V8i_WORKSPACEPATH)
28     _USTN_SITE = $(_MYCOMPANY_PW_V8i_WORKSPACEPATH)Standards/
29     _USTN_PROJECT = $(_MYCOMPANY_PW_V8i_WORKSPACEPATH)Projects/
30     _USTN_USER = $(_MYCOMPANY_PW_V8i_WORKSPACEPATH)Users/
31
32 %else
33     MYCOMPANY_MICROSTATION_CONFIGURATION_TYPE = Not Supported
34 %endif
35
```



<i>Managed Workspace Recipe</i>	
<i>Ingredients</i>	
	1 Predefined CSB
	1 Configuration File
<i>Instructions</i>	
	1. Set up root configuration path in CSB
	2. Include CFG File from CSB
	3. Set key variables based on <code>_VERSION_x_xx</code> that trigger CFG files to be included
	4. Attach CSB to datasource





Platform	Variable Name	Function	Define Until
V8i	_USTN_PROJECTNAME	Defines Name of PCF to load	Site CSB
V8i	_USTN_USERNAME	Defines Name of UCF to load	Discipline CSB
CE	_USTN_WORKSPACENAME	Defines WorkSpace name	WorkSpace CSB
CE	_USTN_WORKSETNAME	Defines WorkSet name	WorkSet CSB



Platform	Variable Name	Default Location	Level
V8i	\$_USTN_SITE)*.cfg	\$_USTN_WORKSPACEROOT)standards/*.cfg	2
V8i	_USTN_PROJECTCFG	\${_USTN_PROJECT}\${_USTN_PROJECTNAME).pcf	3
V8i	_USTN_USERCFG	\$_USTN_USER)\$_USTN_USERNAME).ucf	4
CE	ConfigurationSetup.cfg	\$_USTN_INSTALLED_CONFIGURATION)ConfigurationSetup.cfg	System
CE	WorkSpaceSetup.cfg	\$_USTN_CONFIGURATION)WorkSpaceSetup.cfg	System
CE	\$_USTN_ORGANIZATION)*.cfg	\$_USTN_CONFIGURATION)Organization/	Organization (3)
CE	\$_USTN_USERCFG)	Personal.ucf in Local App Data segregated by Engine and Version	User
CE	_USTN_WORKSPACECFG	\$_USTN_WORKSPACESROOT)\$_USTN_WORKSPACENAME).cfg	WorkSpace
CE	\$_USTN_WORKSPACEROOT)*.cfg		WorkSpace
CE	_USTN_WORKSETCFG	\$_USTN_WORKSETSROOT)\$_USTN_WORKSETNAME).cfg	WorkSet
CE	\$_USTN_WORKSETROOT)*.cfg		WorkSet



Platform	Default Location	Level
CE	\$(_USTN_ORGANIZATION)\$(_USTN_PRODUCT_DIRNAME)/*.cfg	Organization
CE	\$(_USTN_WORKSPACESTANDARDS)\$(_USTN_PRODUCT_DIRNAME)/*.cfg	WorkSpace
CE	\$(_USTN_WORKSETSTANDARDS)\$(_USTN_PRODUCT_DIRNAME)/*.cfg	WorkSet



- Use Configuration Variable Operators in CFG file(s)
- Create CSB for each workspace/WorkSpace
 - Define _USTN_PROJECTNAME, etc.
 - Attach to parent folder



*If **\$(USTN_WORKSETCFG)** is defined as **g:/Clients/DeptOfTransportation/WorkSets/Highway131.cfg**, then:*

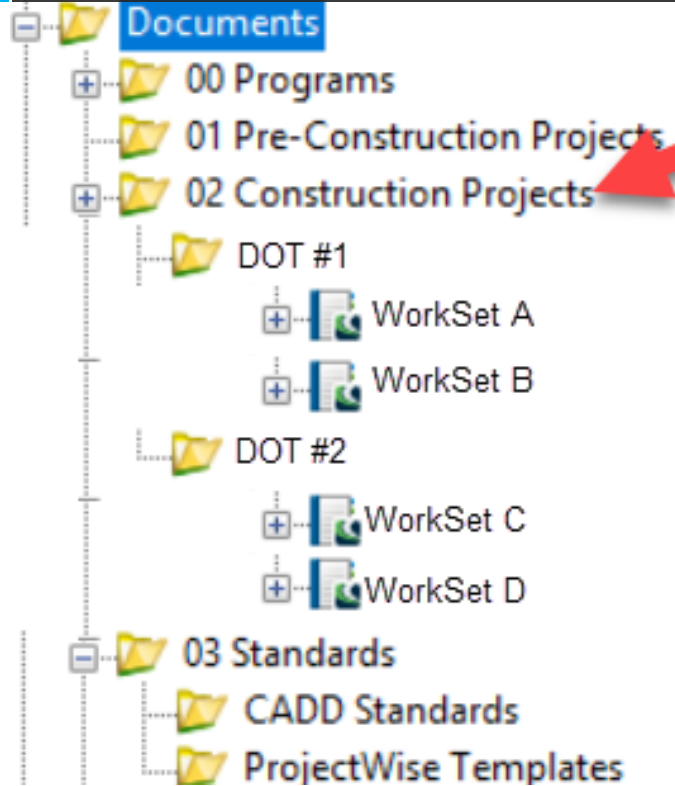
Operator	Syntax	Definition
parentdevdir	parentdevdir(<expression>)	Returns the parent directory, including the device, of <expression>. For example: WORKSETPDD = parentdevdir (\$(_USTN_WORKSETCFG)) gives g:\Clients\DeptOfTransportation\
firstdirpiece	firstdirpiece(<expression>)	Returns the root directory (without device) of <expression>. For example: WORKSETPDD = firstdirpiece (\$(_USTN_WORKSETCFG)) gives Clients
lastdirpiece	lastdirpiece(<expression>)	Returns the portion of the directory closest to the file in <expression>. For example: WORKSETPAR = lastdirpiece (\$(_USTN_WORKSETCFG)) gives WorkSets



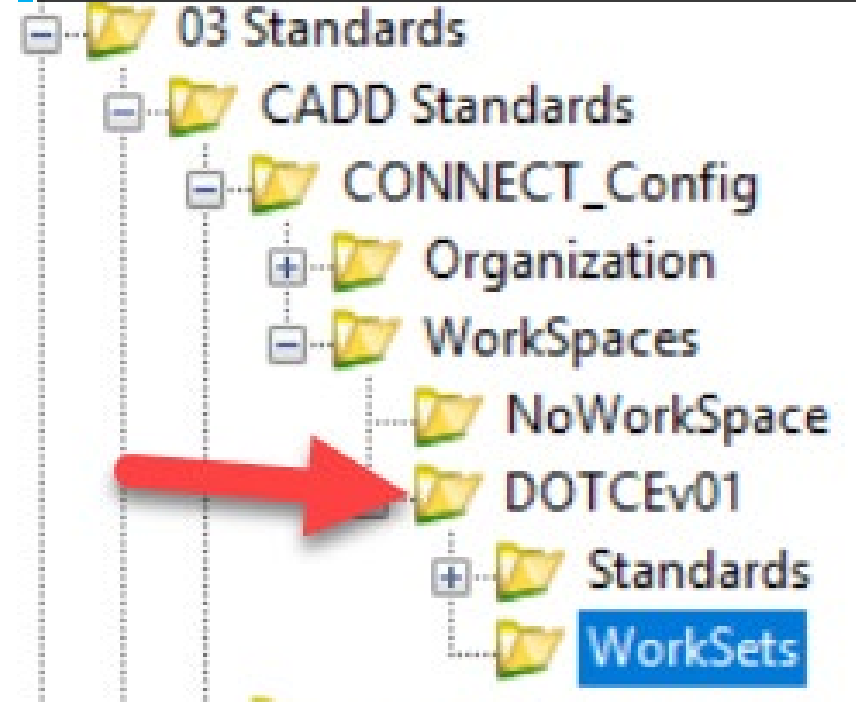
Operator	Syntax	Definition
dms_parentproject	dms_parentproject (<expression>)	Returns the <i>parent ProjectWise Work Area</i> moniker, including the device, of <expression>. For example: MY_PARENT_WORK_AREA = \$(dms_parentproject (_dgndir)) gives pw:\Projects\My Favorite DOT\
dms_project	dms_project (<expression>)	Returns the <i>ProjectWise Work Area</i> moniker, including the device, of <expression>. For example: MY_PARENT_WORK_AREA = \$(dms_project (_dgndir)) gives pw:\Projects\My Favorite DOT\P012345 – IH 25 Project (Bentley)
lastdirpiece	lastdirpiece(<expression>)	Returns the portion of the directory closest to the file in <expression>. For example: _USTN_WORKSETNAME = lastdirpiece (\$(dms_project (_dgndir))) gives P012345 – IH 25 Project (Bentley)

WAIT! My Project

Projects

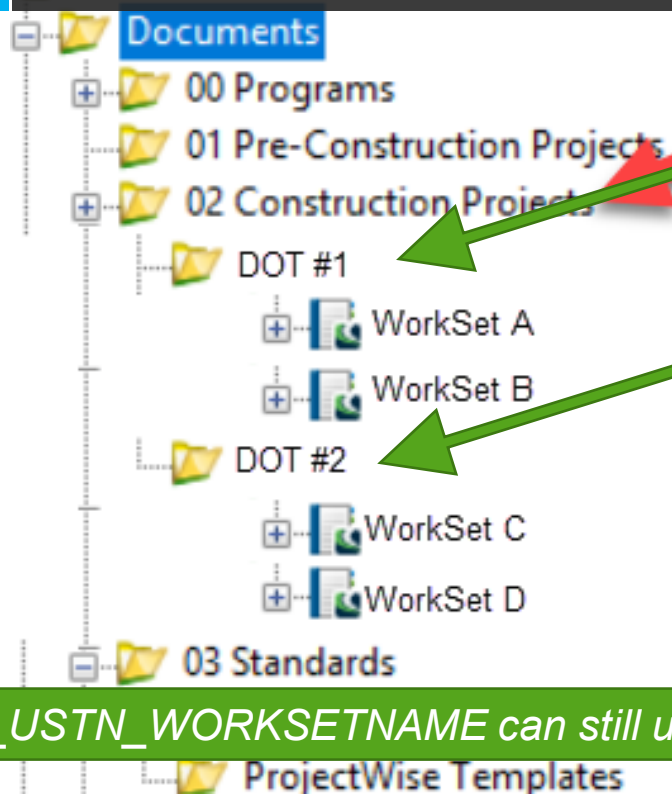


Standards (WorkSpaces)



WAIT! My Project

Projects



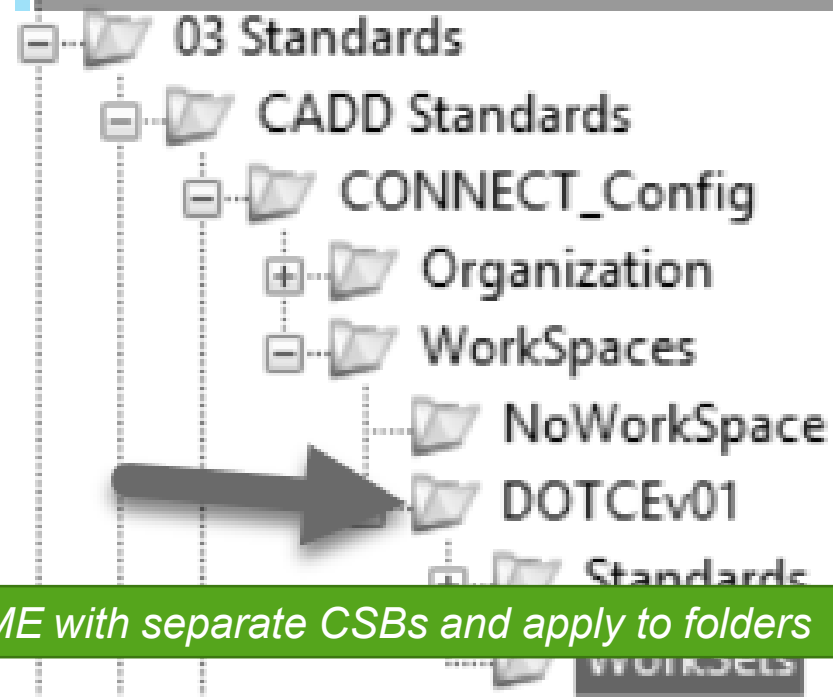
DOT #1 WorkSpace CSB

DOT #2 WorkSpace CSB

Define `_USTN_WORKSPACENAME` with separate CSBs and apply to folders

`_USTN_WORKSETNAME` can still use the folder name of the Work Area

Standards (WorkSpaces)

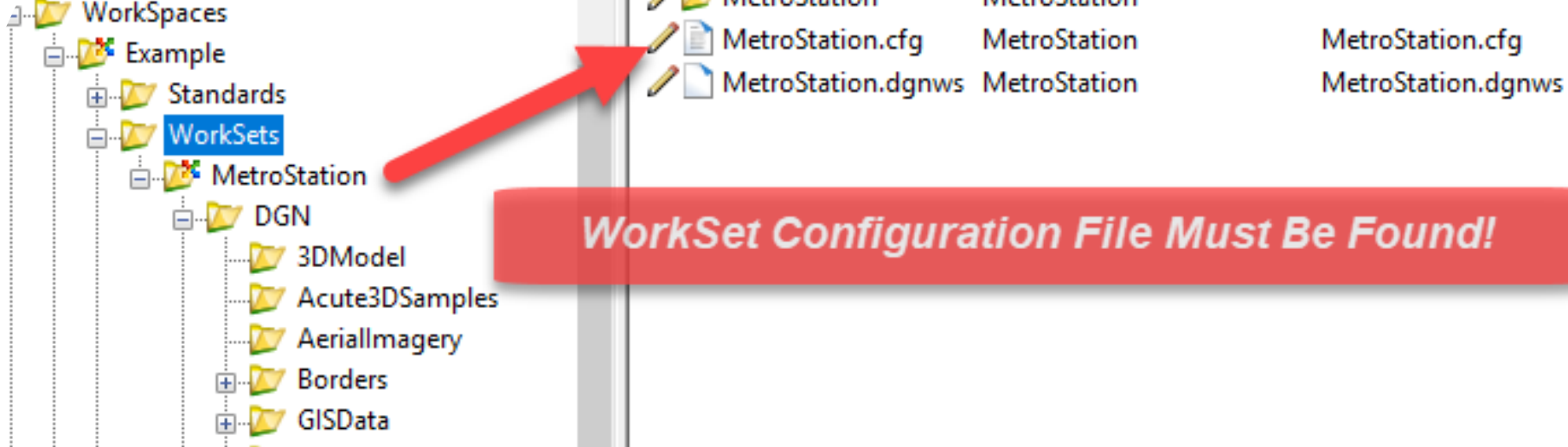




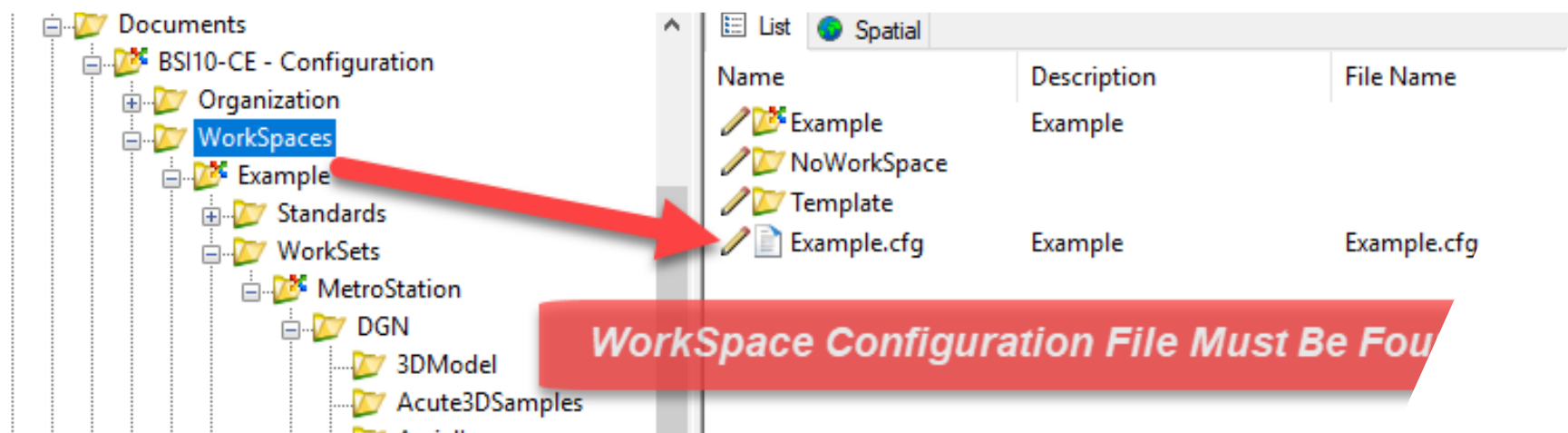
WorkSet Design

Powerful Tool that can Bog Down Users

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WARNING:
WorkSpace and WorkSet Must BOTH Be Defined





DGNWS is the heart

Keep WorkSets small

WorkSet Dichotomy

Asset Team >> Project Team >> Discipline Group

Choose the smallest common denominator

Remember all WorkSet users need to write to the DGNWS

WORKSET HINTS

Powerful Tool that can Bog Down Users



Optimization

Happy Users → Happy ProjectWise Administrators



Minimize Footprint

Use auto-load CFG files

Keep WorkSets small

OPTIMIZATION

Happy Users → Happy ProjectWise Administrators



[ProjectWise Managed Configuration Setup Guide](#)

Latest Example Template Datasource

BSI10-CE - Configuration Work Area

PRACTICE!

Two Ways to Use Sample Data for Managed WorkSpaces