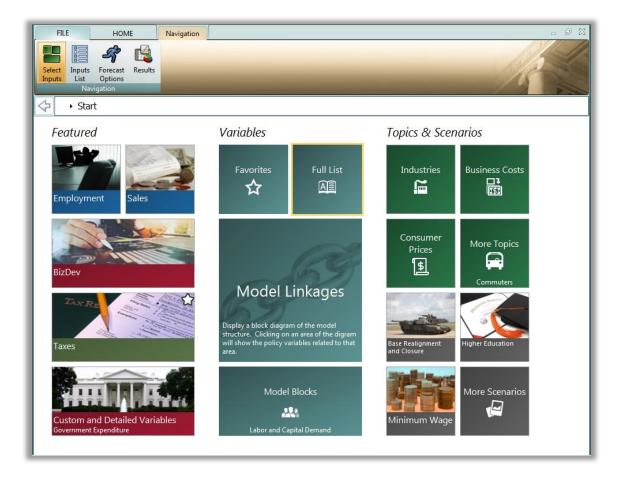


The new 2.0 version of PI+ features a major redesign of the various forecast creation interfaces and the policy variable selector. In keeping up with the industry standard for Windows applications, the design of these interfaces has moved toward the use of smart tiles and has made PI+ much more tablet-friendly in the process.

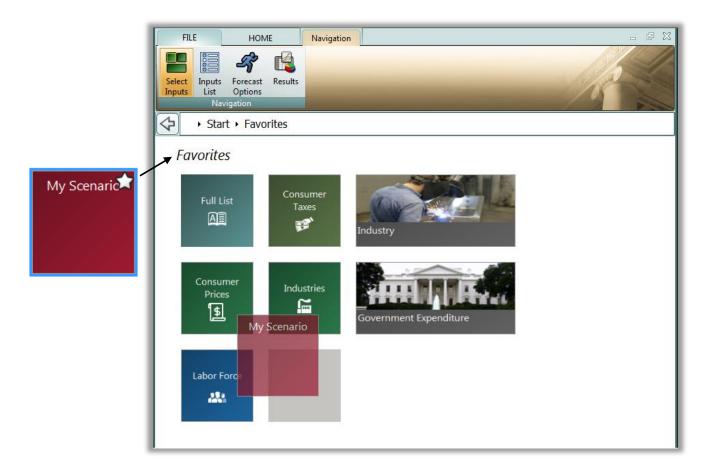
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### **Forecast Navigation Screen**

While the home screen of PI+ will look familiar from the previous version, once you begin the process of creating a forecast you will experience our intuitive new tile design. Navigating to a policy variable via its topic, through a pre-built economic scenario, or with some other grouping like the model blocks, is now more user friendly, with all options on display instead of hidden in drop-down menus. At the forefront of the new forecast navigation screen, the Featured section highlights topics and tools that are likely to be used most often.



Another organizational improvement that we hope will simplify navigating to your most-used policy variables is the Favorites section. Right-clicking any tiles adds them to your Favorites (indicated with a star) where they can be dragged into any customized order.



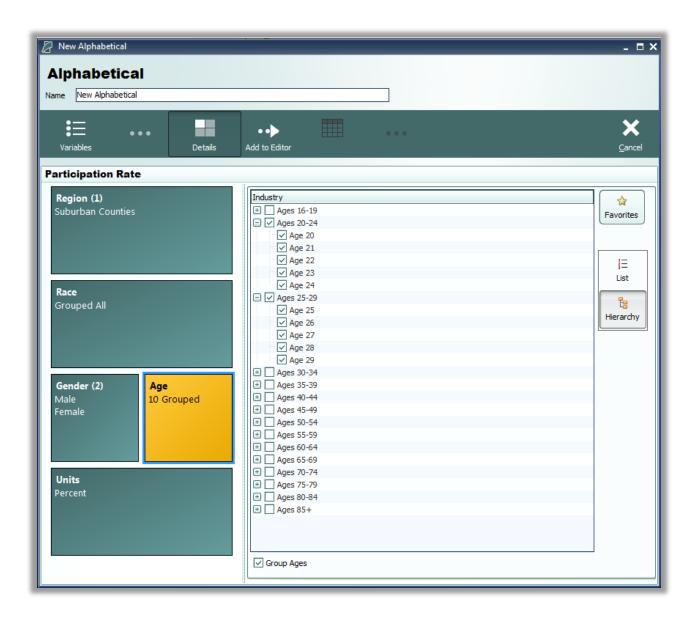
Creating a custom scenario, which consists of any number of policy variables, in custom groups and with pre-selected options, can prove to be another very effective way of easily accessing all of the policy variables you use most. Favoriting the resulting custom scenario tile will make it even easier.

### **Policy Variable Selector**

Clicking on any tile that represents some number of policy variables will open up the policy variable selector in a new window. This selector window is split into several tabs that each represent a step in the process of defining exactly how your policy variable will enter into the model.

New Alphabetical		_ 🗆 X
Alphabetical		
•		
Name New Alphabetical		
		×
Variables Select		<u>C</u> ancel
Search Policy Variables	Participation Rate	
Imports from Rest of World	Variable Info Diagram	
Industry Employment (Exogenous Production)		
Industry Employment (International Exports)		
Industry Employment (Exogenous Production) wit	Market Contraction Contraction	
Industry Sales (Exogenous Production)	• The labor force divided by the size of the population in a particular age-gender-racial cohort.	
Industry Sales (Exogenous Production) without E		
Industry Sales (International Exports)	Pv Variable	
Intermediate Demand		
International Migration	<ul> <li>These policy variables change Participation Rates by gender, race, and age cohort. The rates can be changed by a fixed amount or as a share of the baseline rate.</li> </ul>	
Investment Demand	can be changed by a fixed amount of as a share of the basenile rate.	
Investment Spending		
Investment Tax Credit (share of tax base) Labor Access Index	Example	
Labor Productivity	<ul> <li>To increase the cohort participation rate by from 0.80 to 0.85, use the value 0.05 with the</li> </ul>	
Military Dependents	unit 'Proportion' or use the value 5 with the unit 'Percent'. Applying the same change as a	
Non-Compensation Labor Costs (share of compe	share will change the participation rate by 5% to 0.84 and will increase the size of the labor	
Non-Pecuniary (Amenity) Aspects	force within the age cohort by 5%.	
Nullify Intermediate Inputs Induced by Industry E	A.A.	
Nullify Intermediate Inputs Induced by Industry E	🚾 Details	
Nullify Investment Induced by Industry Employme	• Ages 16-100	
Nullify Investment Induced by Industry Sales	Male, Female	
Occupational Training	<ul> <li>White-NonHispanic, Black-NonHispanic, Other-NonHispanic, Hispanic</li> </ul>	
Output		
Participation Rate		
Personal Taxes		
Prison Population		
Production Cost		

The first tab holds a list of logically grouped policy variables that can be selected. Search functionality has been added to this policy variable list to cut down on time spent looking through the longer lists of variables. Clicking a variable will show details about it and its options, as well as a diagram that depicts how the policy variable relates to other variables and fits into the model. After choosing a variable, clicking the Select arrow button will move the variable to the Details tab.



The Details tab is where you decide what the exact form of the policy variable should be. There is now a hierarchical view of industry, commodity, occupation, and age cohort details available on this tab to allow for easier input of values at a more aggregate level. Once all of the options on the policy variable have been specified, you will be able to click the Add to Editor button to move the variable into the editing grid.

Variables	Details		2 'alues	••• <u>A</u> dd to Inp	outs			X Cancel		<b>↓ </b> → oreader		ulator
Category 🔻	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
Participation Rate	Male, All Races, Ages (10)	Suburban Counties	Percent	-1	-0.875	-0.75	-0.625	-0.5	-0.375	-0.25	-0.125	
<ul> <li>Participation Rate</li> </ul>	Female, All Races, Ages (10)	Suburban Counties	Percent	-1	-0.875	-0.75	-0.625	-0.5	-0.375	-0.25	-0.125	
	Age Age 20 Age 21 Age 22 Age 23 Age 24 Age 25 Age 26 Age 27 Age 28 Age 29											

The editor will allow you to input yearly values for each policy variable. One policy variable will be created for each option specified on the Details tab, unless you choose to group all details into one variable, which is depicted above for the age and race dimensions. Finished variables can be added to the forecast inputs list by clicking the final arrow button, Add to Inputs.

# **Inputs List**

The forecast inputs list is a screen that displays which policy variables will be included as inputs to the model as it runs a simulation forecast. The policy variable import and export features are located on the inputs list. Importing in particular has seen big improvements, including an added ability to import policy variables from a REMI workbook file, an import preview window that allows for choosing which policy variables to import from a file and whether their yearly values or regions should be modified. Importing can also detect policy variable data problems before they happen and better handles each of the legacy import file formats.

FILE     HOME     Navigation       Imputs     Imputs     Forecast       Navigation     Navigation														
Acti	Policy Variable Inputs Active Edit Group													
	Active	View Category	Detail	Region	Ur	nits	2015	2016	2017	2018	2019	2020	2021	2022
			Male, All Races, Ages (10)	Suburban Coun	nties Pe	rcent	-1	-0.875	-0.75	-0.625	-0.5	-0.375	-0.25	-0.125
	• 🗸	Participation Rate	Female, All Races, Ages (10)	Suburban Counties		rcent	-1	-0.875	-0.75	-0.625	-0.5 -0.37		-0.25	-0.125
		Details Variables												
		Category	Detail	Units	2015		2016	2017		2018	2019		2020	2 ^
		Participation Rate	Female, White-NonHispanic, Age 2	0 Proportion	-0.007454	28 -0.0	00633749	-0.005374	131 -0	.00450124	-0.003712	219 -0.	.00279286	-0.001
		Participation Rate	Female, White-NonHispanic, Age 2	1 Proportion	-0.007454	28 -0.0	00633749	-0.005374	-0	.00450124	-0.00371	219 -0.	.00279286	-0.001
		Participation Rate	Female, White-NonHispanic, Age 2	2 Proportion	-0.007880	82 -0.0	00703077	-0.006033	806 -0	.00505103	-0.00398	506 -0.	.00300241	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2	3 Proportion	-0.007880	82 -0.0	00703077	-0.006033	306 -0	.00505103	-0.00398		.00300241	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2	4 Proportion	-0.007880		00703077	-0.006033	306 -0	.00505103	-0.00398		.00300241	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2		-0.008778		00757341	-0.006498		.00542797	-0.004339		.00326101	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2		-0.008778		00757341	-0.006498		.00542797	-0.004339		.00326101	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2		-0.008778		00757341	-0.006498		.00542797	-0.004339		.00326101	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2		-0.008778		00757341	-0.006498		.00542797	-0.004339		.00326101	-0.002
		Participation Rate	Female, White-NonHispanic, Age 2		-0.008778		00757341	-0.006498		.00542797	-0.004339		.00326101	-0.002
		Participation Rate	Female, Black-NonHispanic, Age 20		-0.005857		00485575	-0.004149		.00366154	-0.00304		.00222124	-0.001
		Participation Rate	Female, Black-NonHispanic, Age 21		-0.005857		00485575	-0.004149		.00366154	-0.00304		.00222124	-0.001
		Participation Rate	Female, Black-NonHispanic, Age 22		-0.006721		00599224	-0.005101		.00410815	-0.003220		.00247085	-0.001
		Participation Rate	Female, Black-NonHispanic, Age 23	Proportion	-0.006721	82 -0.0	00599224	-0.005101	-0	.00410815	-0.003220	0-18 -0.	.00247085	-0.001
														>

Another new feature is the ability to inspect the converted versions of a given policy variable that will be the ones actually used by the model. Clicking on the magnifying glass icon on a policy variable in the Inputs List will open this converted variable window.

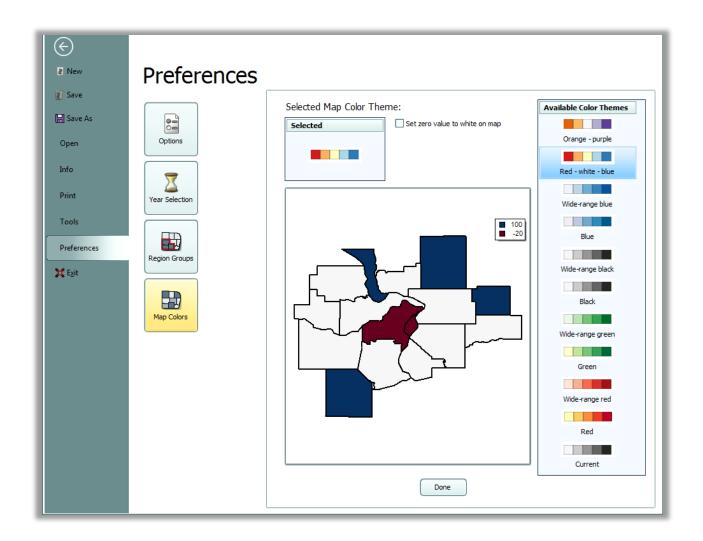
### **Forecast Options**

Running a forecast has been moved to its own screen. There are frequently asked questions about the different options for running the relevant forecast right on this screen alongside the usual year selector and also closure options and iteration settings if they apply to the forecast being run. Simply click the run forecast button once you have selected your preferred options and the model will start calculating results, as indicated by the progress bar.

FILE HOME Navigation	- B X						
Select Inputs List Options Results Navigation							
Forecast Name National Control 1	<b>A</b> Run Forecast						
Run Years	Frequently Asked Questions						
	How do I use forecast years?						
2015 2050 2060	What happens to policy variable changes made in the years prior to the forecast start year?						
Run forecast from 2020 to 2050	How do I use iteration settings?						
Closure Options	What are closure options?						
Type Keynesian	What is the Keynesian Response?						
Historically Observed	What is the Anticipatory Fed Response?						
Keynesian Anticipatory Fed	What is the Historically Observed Response?						
Iteration Settings	Can I set the number of years for the Federal Reserve Response time?						
Minimum Iterations: 35 ()							
Maximum Iterations: 35 ()							
Solution Tolerance: 0.00005							
Forecast Information							
Running a National Control (Based on Standard National Control) for 31 years.							

## **Locating Other New Features**

There are some new preference options available under the File > Preferences menu. Regions can now be grouped so that results are displayed for only some of your models regions. Additionally, the map of your regions can now be customized to use a variety of different color schemes, thereby making the map better for visualizing regional differences in the results and also more colorblind-friendly.



The Model Details menu located on the home page of PI+ and also under File > Info contains two new interfaces. There is now a window for viewing all frequently asked questions about PI+in one place and an option to view them by topic. There is also a window for referencing all of the PI+ model documentation using a built-in PDF viewer.