

Build a self-managing enterprise with system dynamics

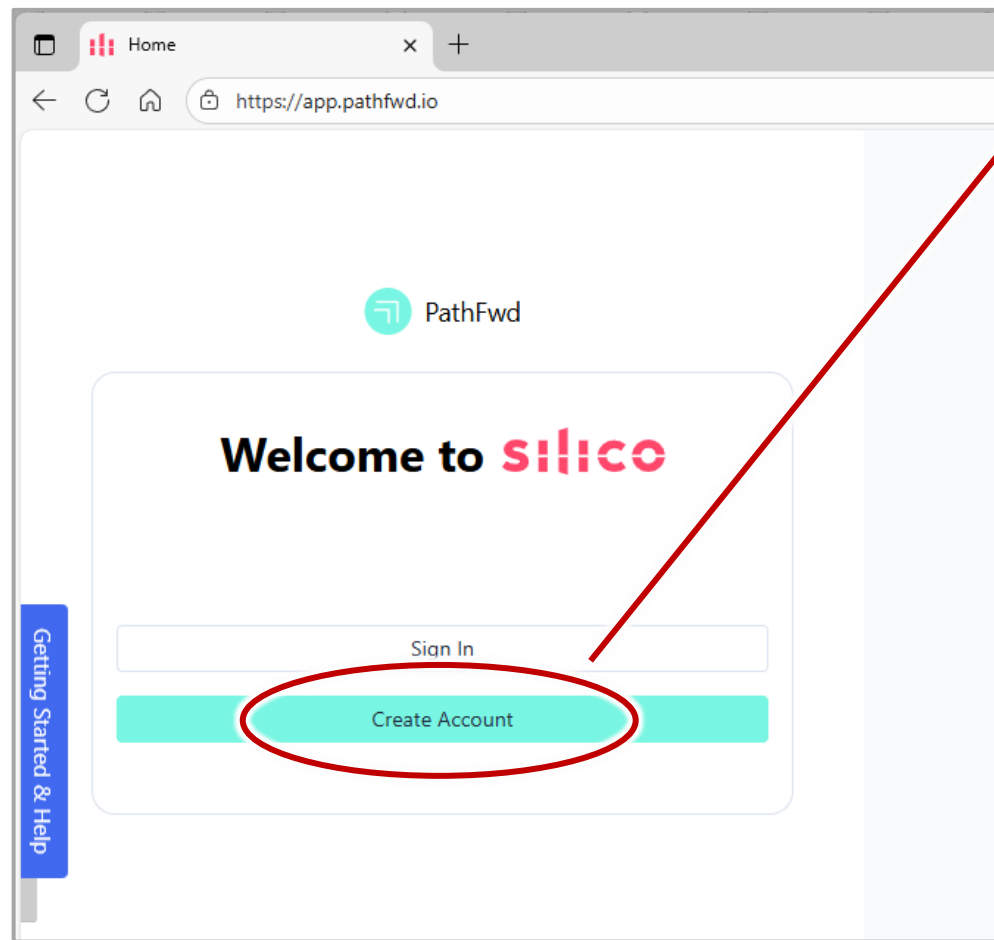
Kim Warren

These slides at sdl.re/buildAI-SME

*(How agentic-AI leads to the self-managing
enterprise ... sdl.re/AIshowITS)*

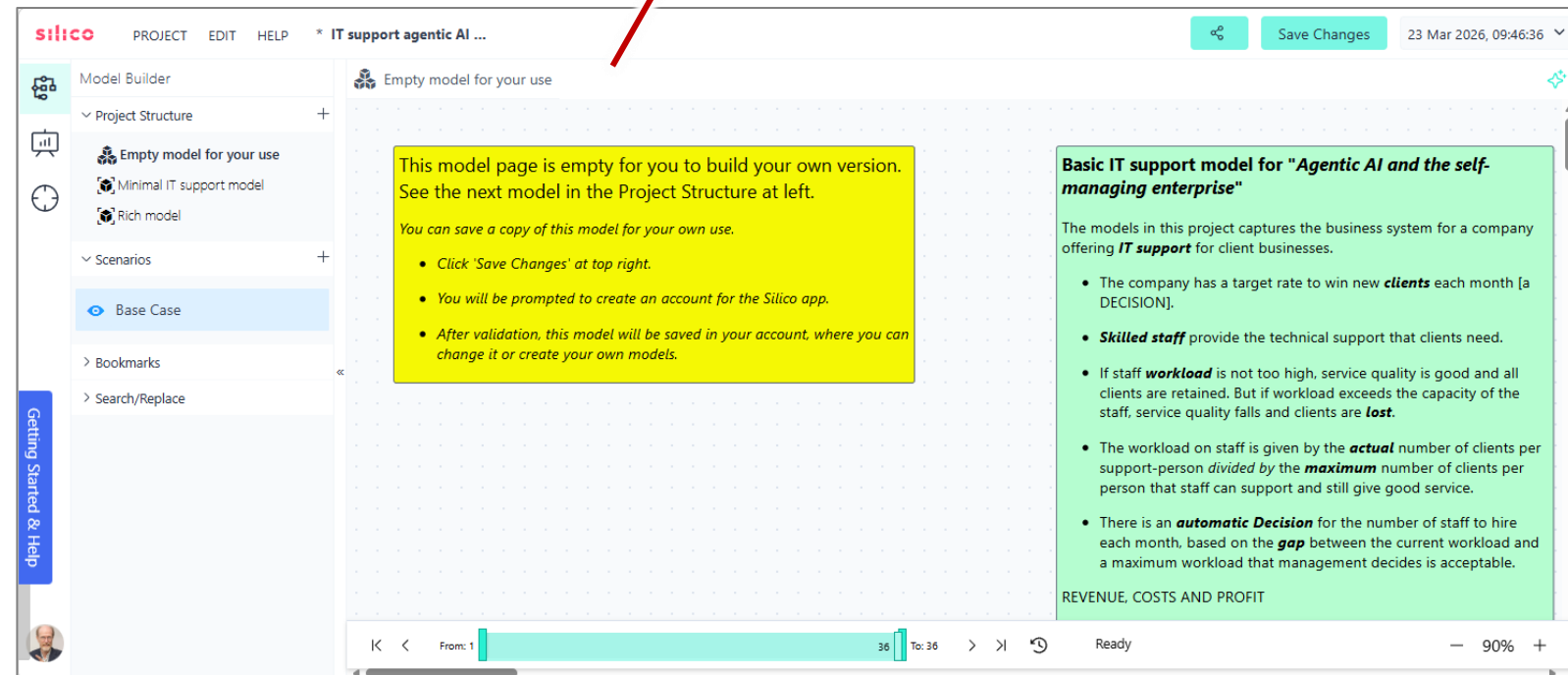
sdcourses.com

Go to sdl.re/AImodelITS ...



Create a Silico account

The project modeling screen opens



You should see ...

The current model

Save project to your Cloud account

Complete models

Create scenarios

The screenshot shows the Silico Model Builder interface. The top bar includes the Silico logo, menu items (PROJECT, EDIT, HELP), a project title (* IT support agentic AI ...), and a 'Save Changes' button. The left sidebar contains a 'Model Builder' section with 'Project Structure' (listing 'Empty model for your use', 'Minimal IT support model', and 'Rich model') and 'Scenarios' (listing 'Base Case'). A 'Getting Started & Help' button is at the bottom left. The main workspace is titled 'Empty model for your use' and contains a yellow instructional box. A large red-bordered box in the center of the workspace contains the text 'Workspace where you *build* the models'. On the right, a green sidebar displays a 'Basic IT support model for managing enterprise' with a list of bullet points and a formula for revenue minus costs.

silico PROJECT EDIT HELP * IT support agentic AI ... Save Changes 23 Mar 2026, 09:46:36

Model Builder

Project Structure

- Empty model for your use
- Minimal IT support model
- Rich model

Scenarios

- Base Case

Bookmarks

Search/Replace

Getting Started & Help

Empty model for your use

This model page is empty for you to build your own version. See the next model in the Project Structure at left.

You can save a copy of this model for your own use.

- Click 'Save Changes' at top right.
- You will be prompted to create an account for the Silico app.
- After validation, this model will be saved in your account, where you can change it or create your own models.

Workspace where you *build* the models

Basic IT support model for managing enterprise"

The models in this project capture offering **IT support** for client busi

- The company has a target DECISION].
- Skilled staff** provide the te
- If staff **workload** is not too clients are retained. But if v staff, service quality falls ar
- The workload on staff is gi support-person *divided by* person that staff can supp
- There is an **automatic Dec** each month, based on the a maximum workload that

REVENUE, COSTS AND PROFIT

The company makes **revenue** of **staff costs** of \$5,000/month per \$200,000/month + \$2,000/mont Revenue minus (Staff costs + Otl

OPTIONS

From: 1 36 To: 36 Ready 90%

Change project time-settings

Back to see all your projects

List of models in the project

Create scenarios

Save project to your Cloud account

Version history at every 'Save'

Share the project

'<<' Collapse the side-panel

Workspace where you **build** the models

Time-bar - where you are in the model's time range

Zoom and scroll your view of the model

The screenshot shows the Silico Model Builder interface. At the top, there's a menu bar with 'PROJECT', 'EDIT', and 'HELP'. Below it, a 'Model Builder' sidebar on the left contains 'Project Structure' (with 'Empty model for your use', 'Minimal IT support model', and 'Rich model'), 'Scenarios' (with 'Base Case'), 'Bookmarks', and 'Search/Replace'. The main workspace is titled 'Empty model for your use' and contains a yellow instruction box. To the right, a 'Basic IT support model for managing enterprise' panel is visible. At the bottom, there's a time-bar and a zoom/scroll control.

silico PROJECT EDIT HELP * IT support agentic AI ...

Model Builder

Project Structure

- Empty model for your use
- Minimal IT support model
- Rich model

Scenarios

- Base Case

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OPTIONS

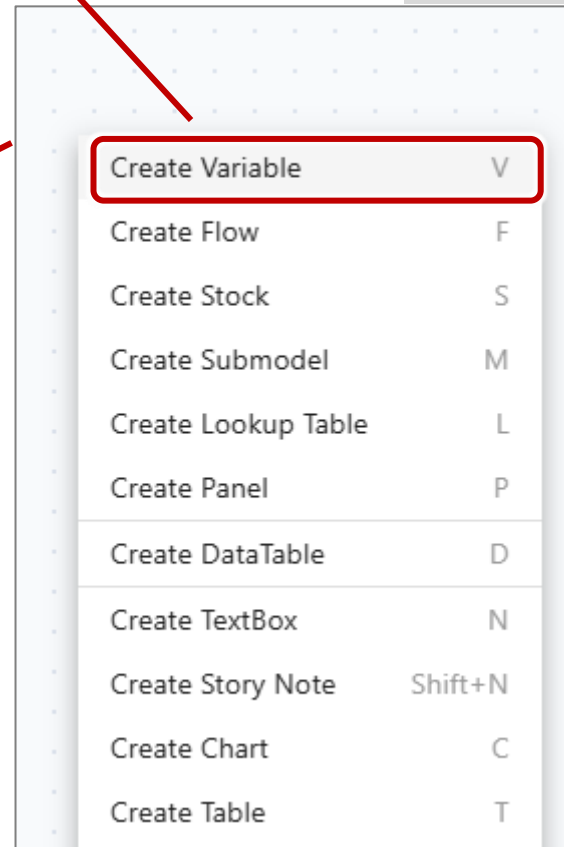
From: 1 To: 36 36 Ready 90%

Add a Variable for growing Revenue

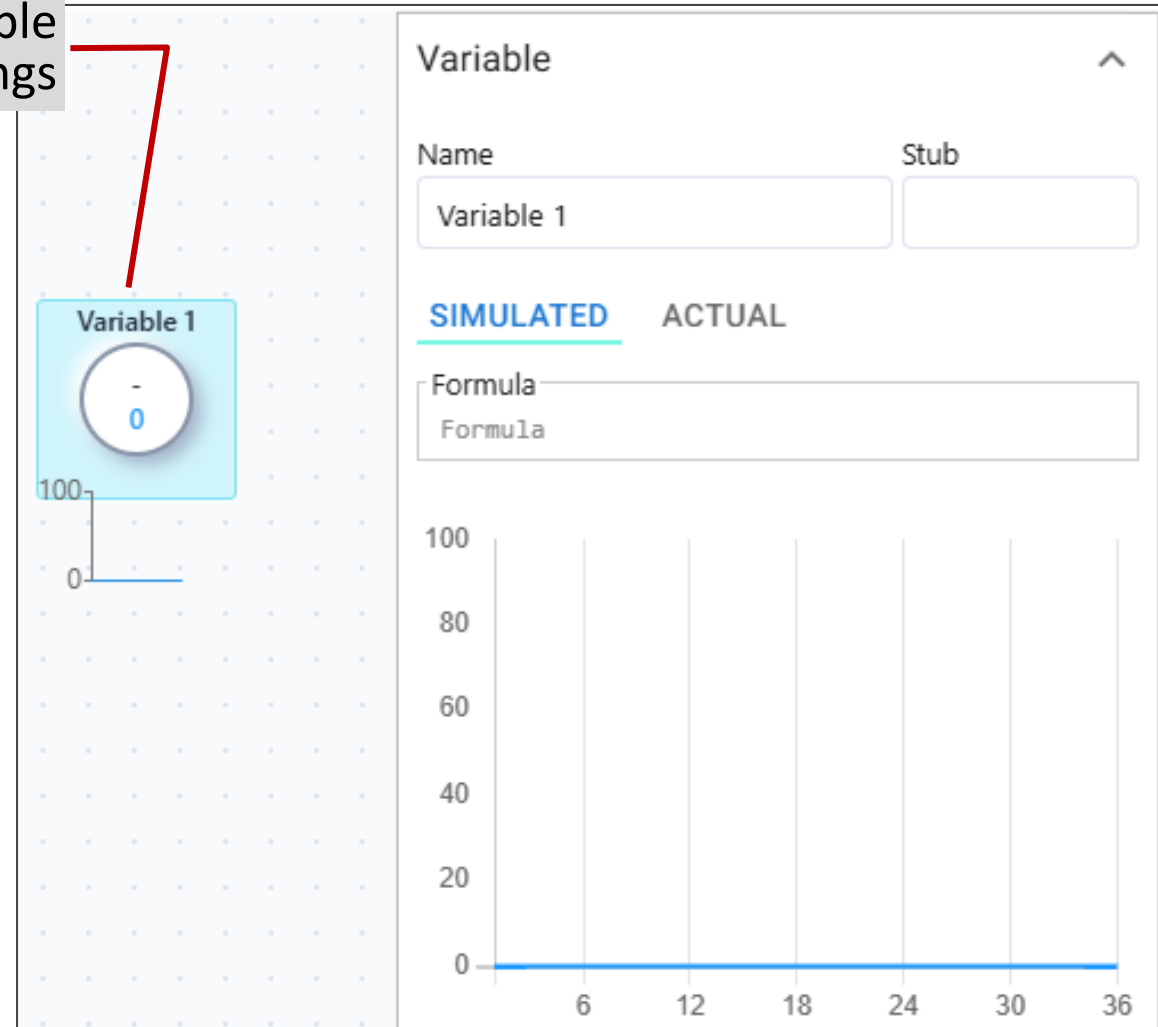
At upper-right of the Workspace ...

1. Right-click .. choose
'Create Variable'

... OR just hit 'V' to add a
Variable at this location



2. Select the Variable
to display its settings



Add a Variable for growing Revenue

2. Select the Variable

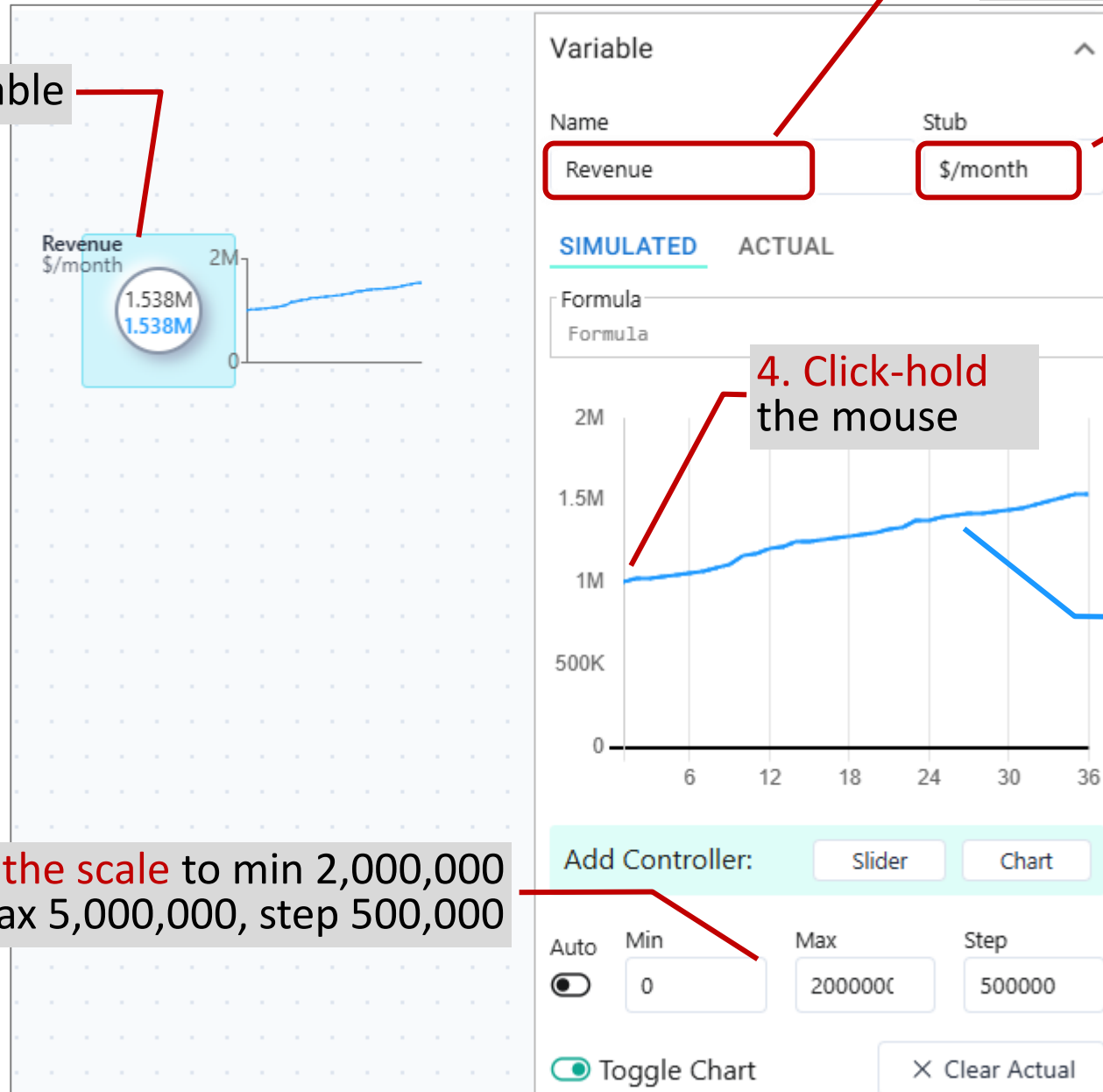
3. Name the Variable

4. Add a 'stub' ..
'\$/month'

4. Click-hold
the mouse

5. Drag to sketch Revenue
growing from \$1m to ~ \$1.5m

3. Set the scale to min 2,000,000
max 5,000,000, step 500,000

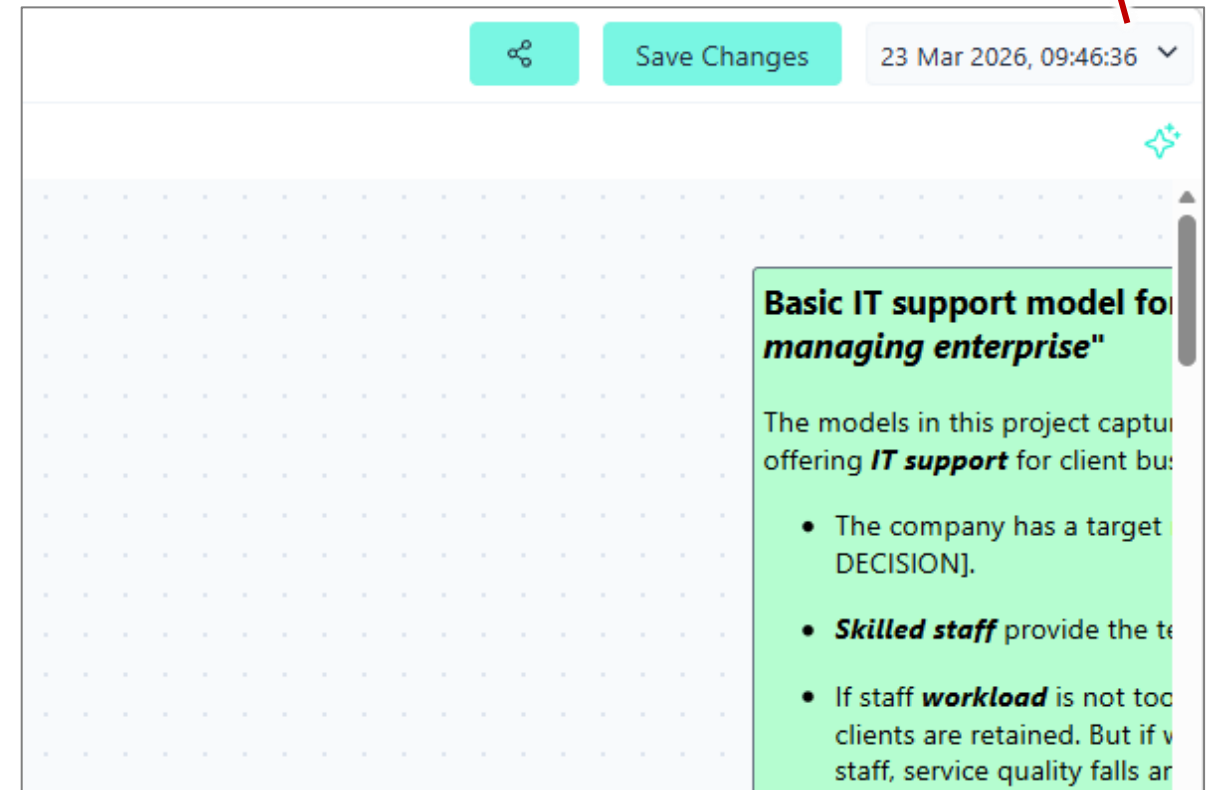


Mistakes ? ...

Ctrl-Z *undoes* any number of steps
since the last Save

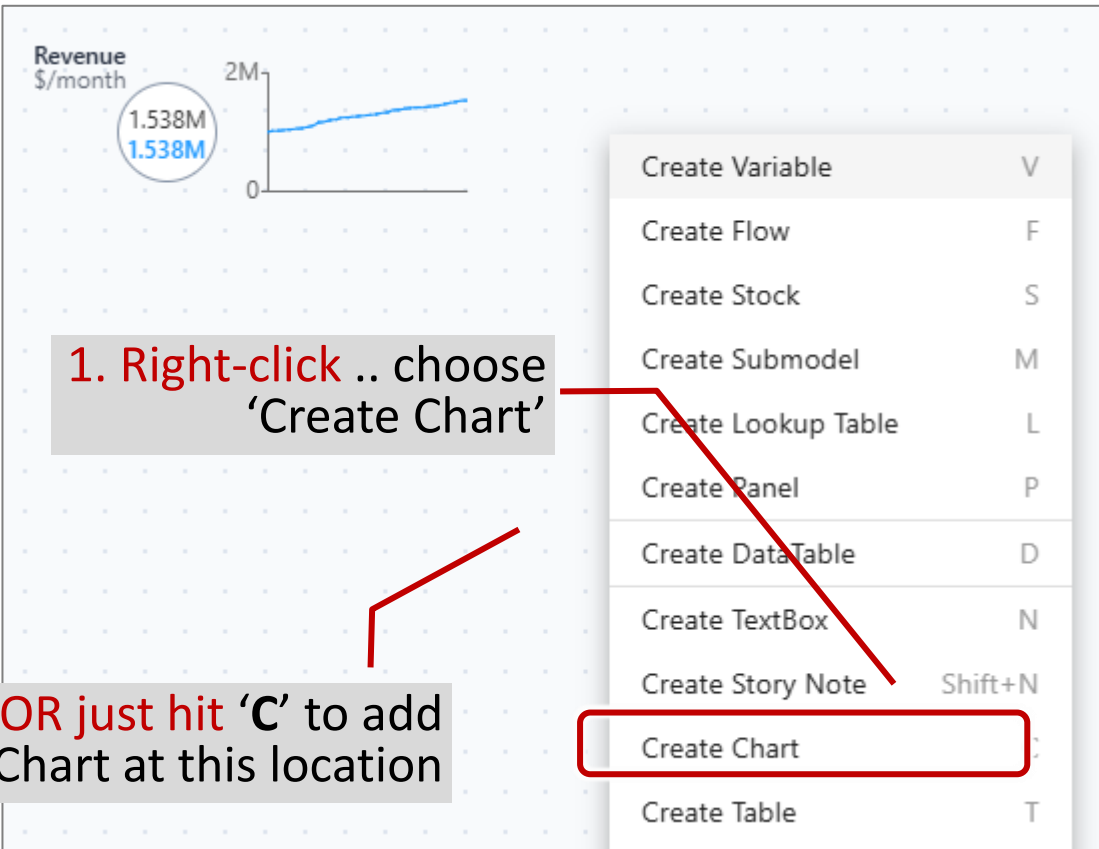
Ctrl-Y *redoes* any number of steps

... or open past Versions



Add a Chart

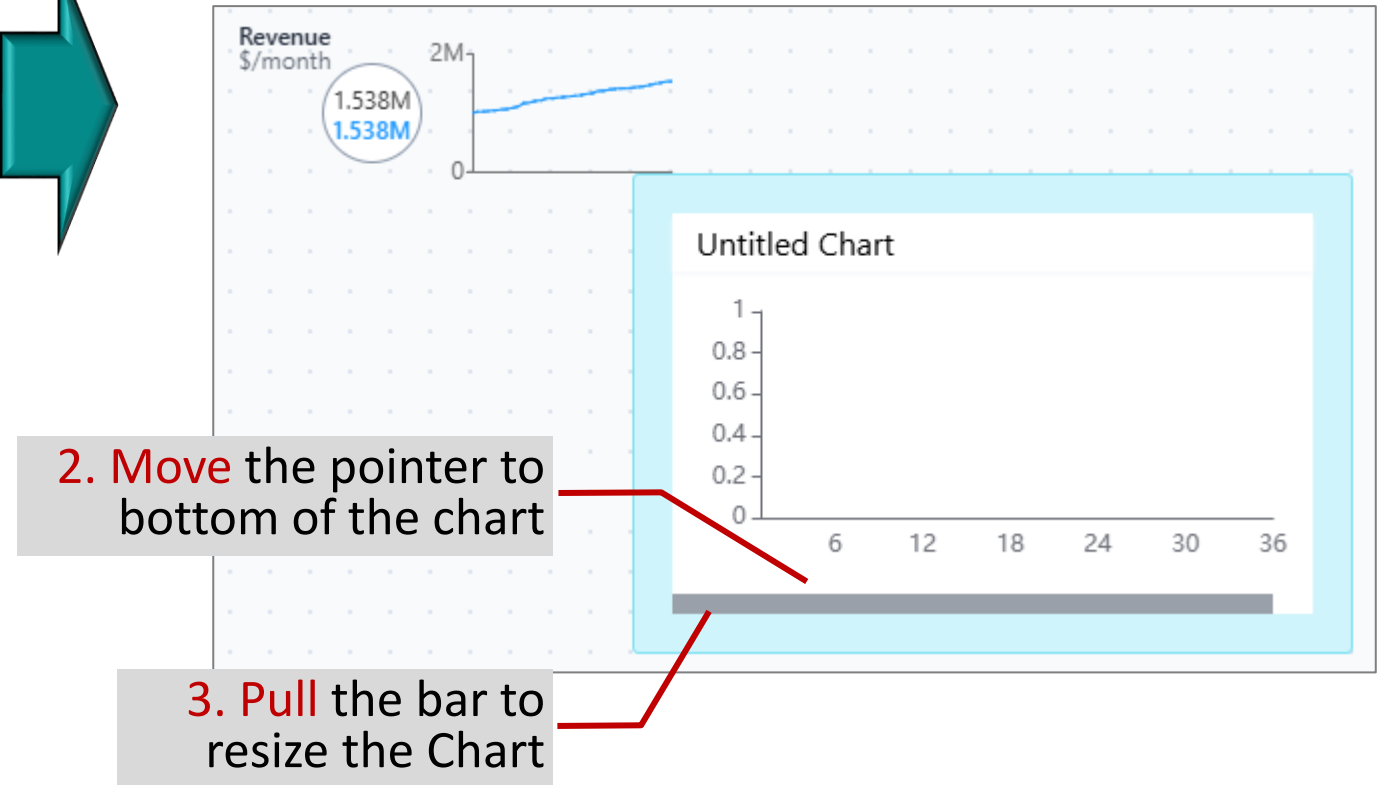
Below-right from the Variable ...



The screenshot shows a software interface with a grid background. In the top-left corner, there is a small line chart titled "Revenue \$/month" with a y-axis ranging from 0 to 2M. A data point is highlighted with a value of 1.538M. A context menu is open, listing various options: "Create Variable" (V), "Create Flow" (F), "Create Stock" (S), "Create Submodel" (M), "Create Lookup Table" (L), "Create Panel" (P), "Create DataTable" (D), "Create TextBox" (N), "Create Story Note" (Shift+N), "Create Chart" (highlighted with a red box), and "Create Table" (T). A red arrow points from the "Create Chart" option to the chart area. A text box on the left says "1. Right-click .. choose 'Create Chart'". Another text box at the bottom left says "... OR just hit 'C' to add a Chart at this location".

1. Right-click .. choose 'Create Chart'

... OR just hit 'C' to add a Chart at this location



The screenshot shows the same software interface as before, but with a new chart titled "Untitled Chart" added to the bottom-right. The chart has a y-axis ranging from 0 to 1 and an x-axis ranging from 0 to 36. A red arrow points from the text box "2. Move the pointer to bottom of the chart" to the bottom of the chart. Another red arrow points from the text box "3. Pull the bar to resize the Chart" to a horizontal bar at the bottom of the chart.

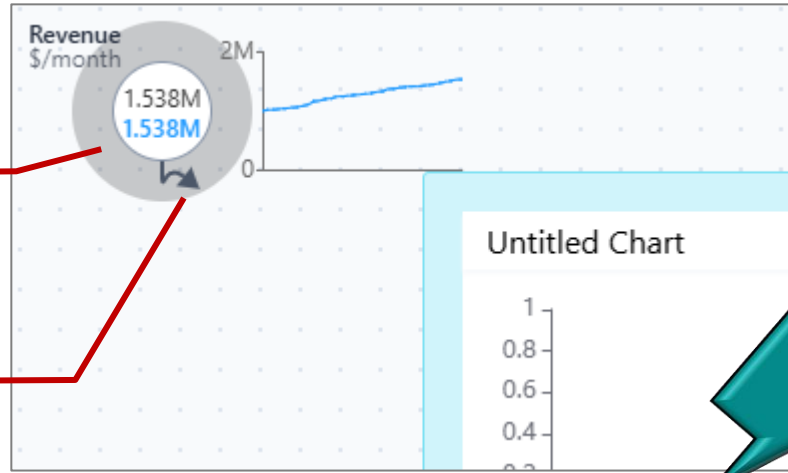
2. Move the pointer to bottom of the chart

3. Pull the bar to resize the Chart

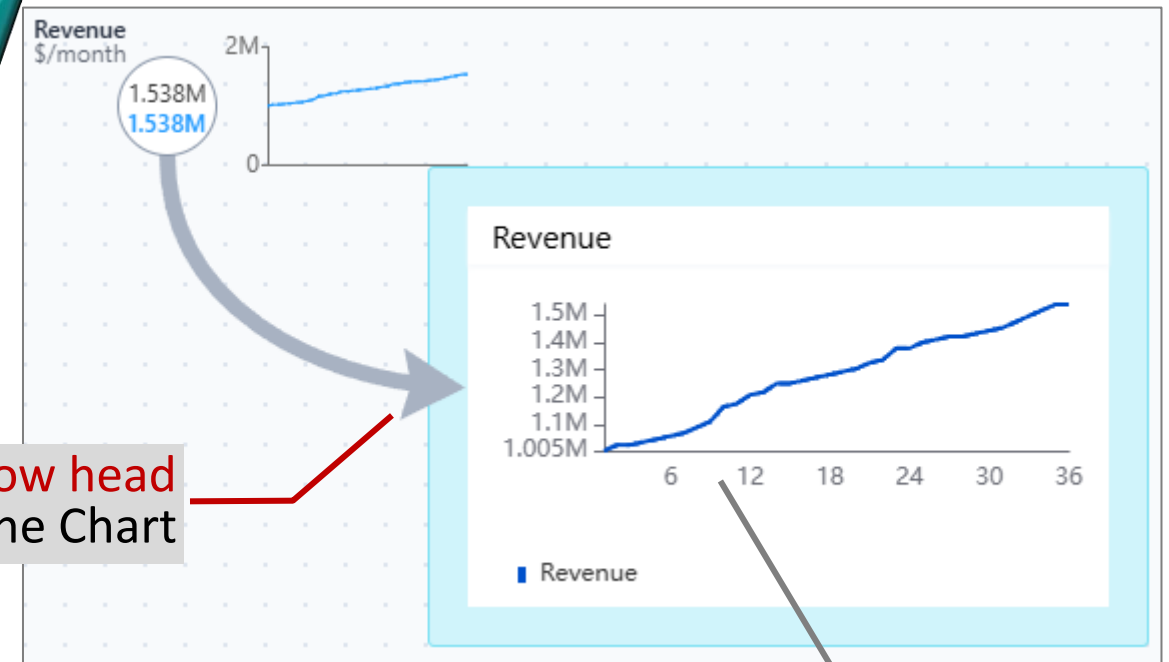
Add 'Revenue' to the Chart

1. Move the pointer close to the Variable – a 'cloud' appears

2. Click-hold in the cloud – a link-arrow is started



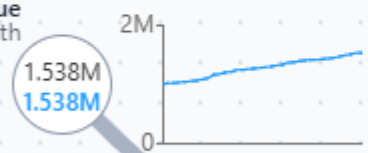
3. Drag the arrow head **into** the Chart



The values for 'Revenue' are added to the Chart + its name as Title + a legend

Edit the Chart for growing Revenue

Revenue \$/month

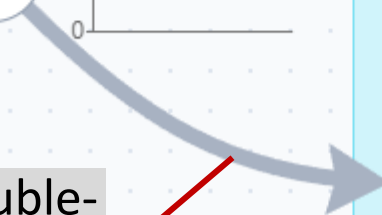


1.538M
1.538M

1. Select the Chart



[optional] Double-click to delete the link



3. Set the legend position – or hide it

[optional] Type in a different title

Chart

Chart Title

X Axis Label

Y Axis Label

X Axis Steps

X Axis Steps

Auto Min Max Step

0 200000€ 500000

Legend Position

Hidden

= Revenue

Select Series

1. Set the value-scale

2. Choose a line-colour

Add 'Revenue per client'

1. Add another Variable

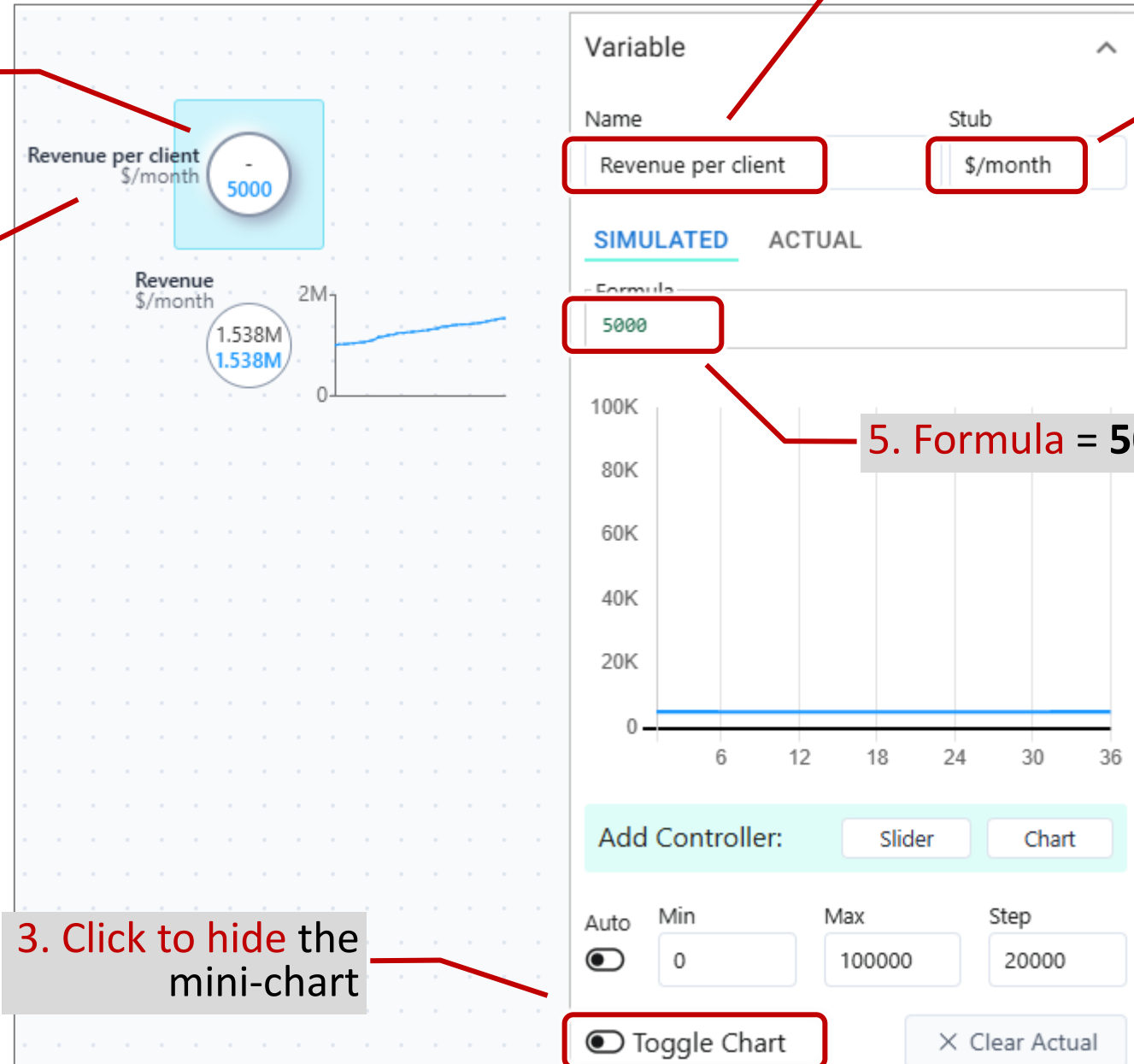
2. Drag its name to the left

3. Click to hide the mini-chart

3. Name the Variable

4. Add a 'stub' .. '\$/month'

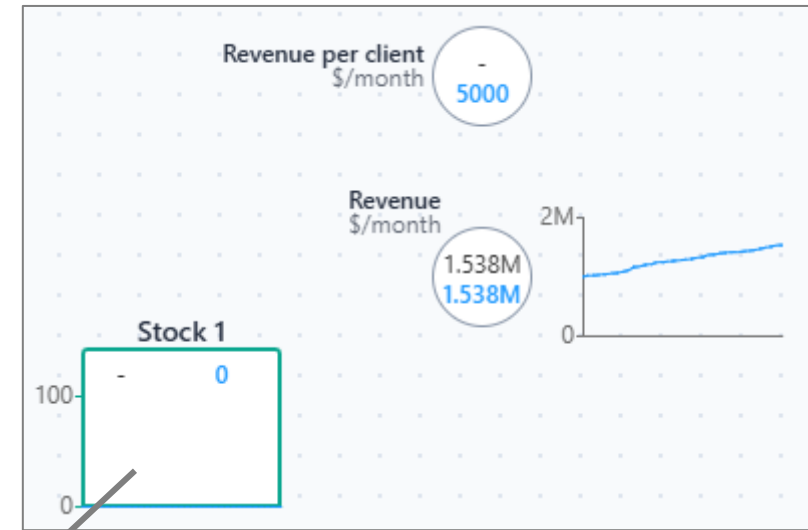
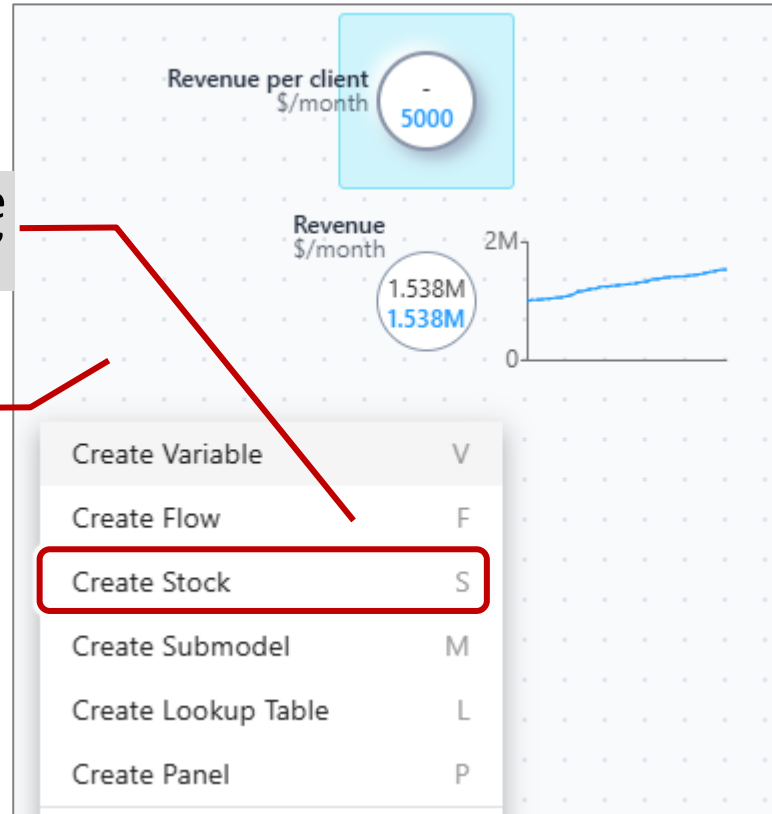
5. Formula = 5000



Add a growing stock of Clients

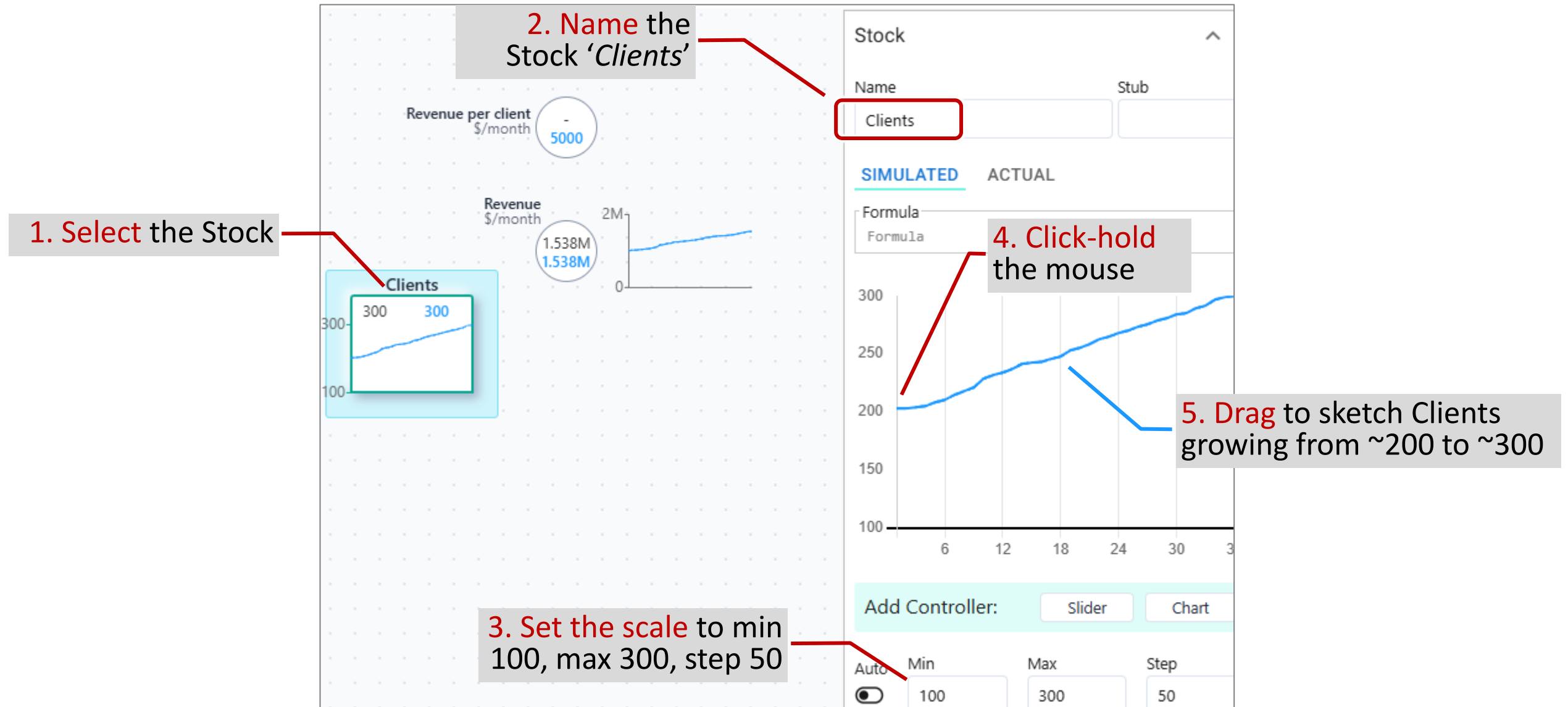
1. Right-click .. choose
'Create Stock'

... OR just hit 'S' to add
a Stock at this location



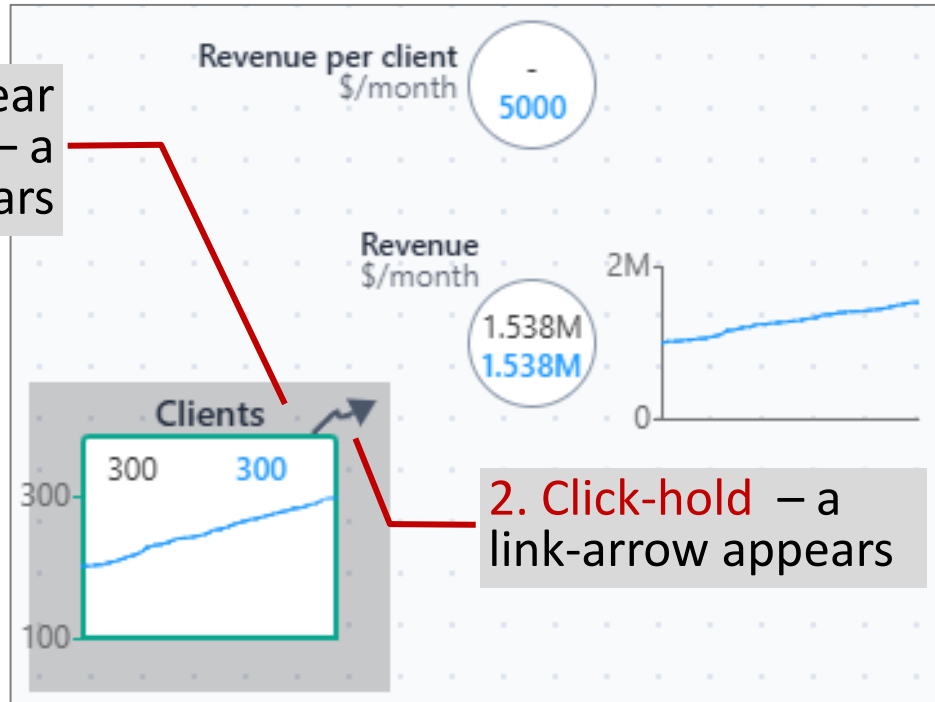
A Stock object is added

Add a growing stock of Clients



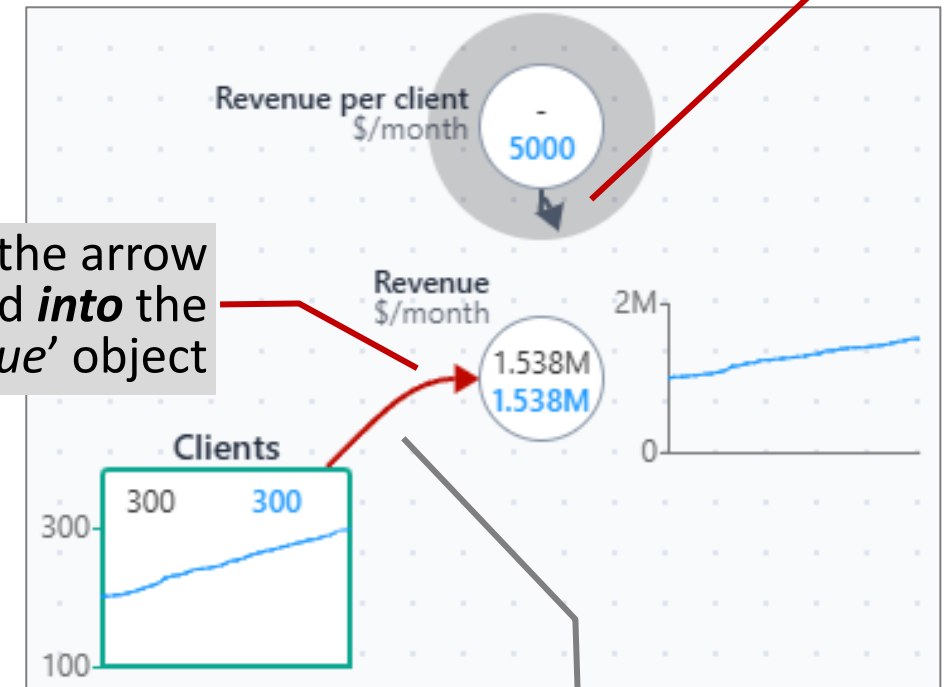
Link items to enable calculations

1. Place pointer near the 'Clients' stock – a 'cloud' appears



2. Click-hold – a link-arrow appears

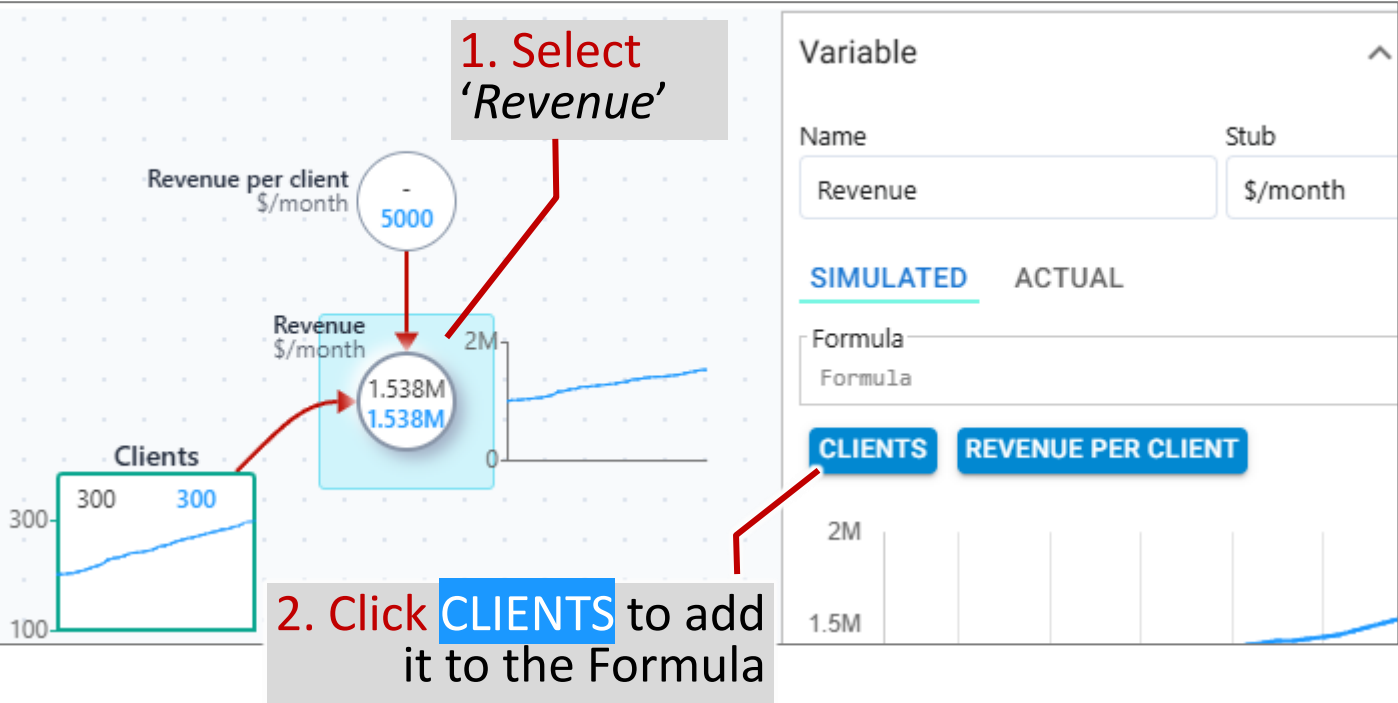
3. Drag the arrow head *into* the 'Revenue' object



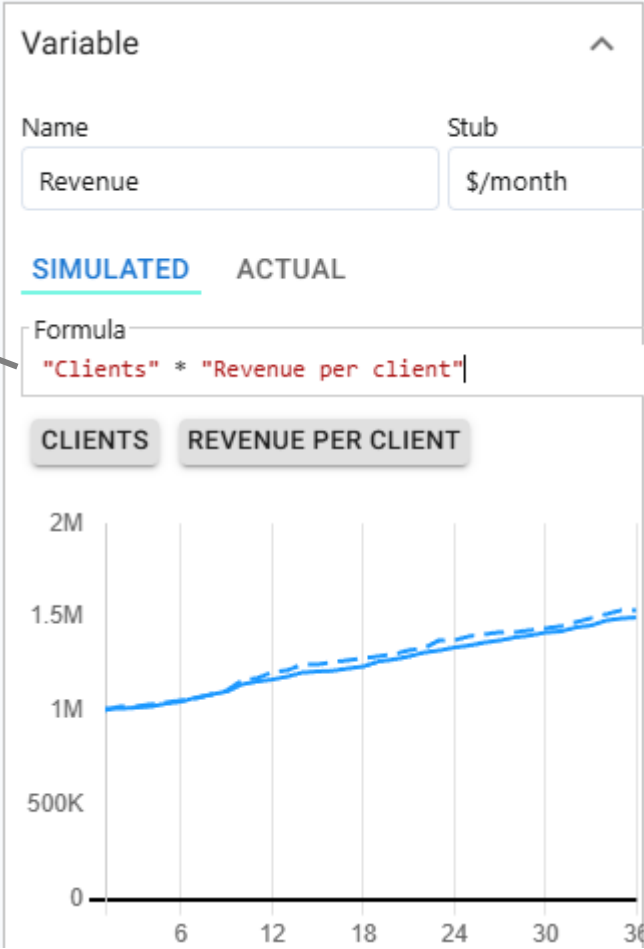
4. Repeat to link 'Revenue per client' to 'Revenue'

The link is made, but red says it is not yet used to calculate Revenue

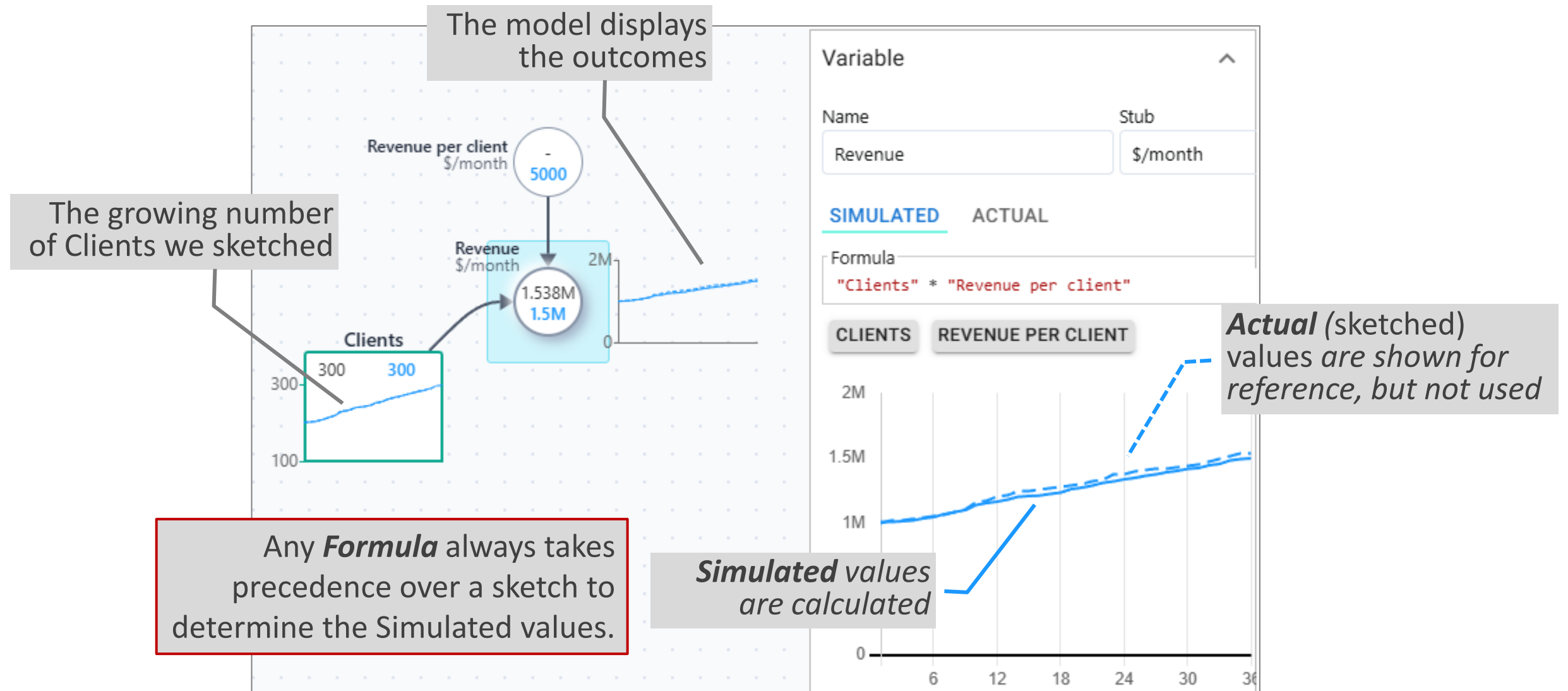
Calculate 'Revenue'



The Formula is completed



Calculate 'Revenue' – you should see ...

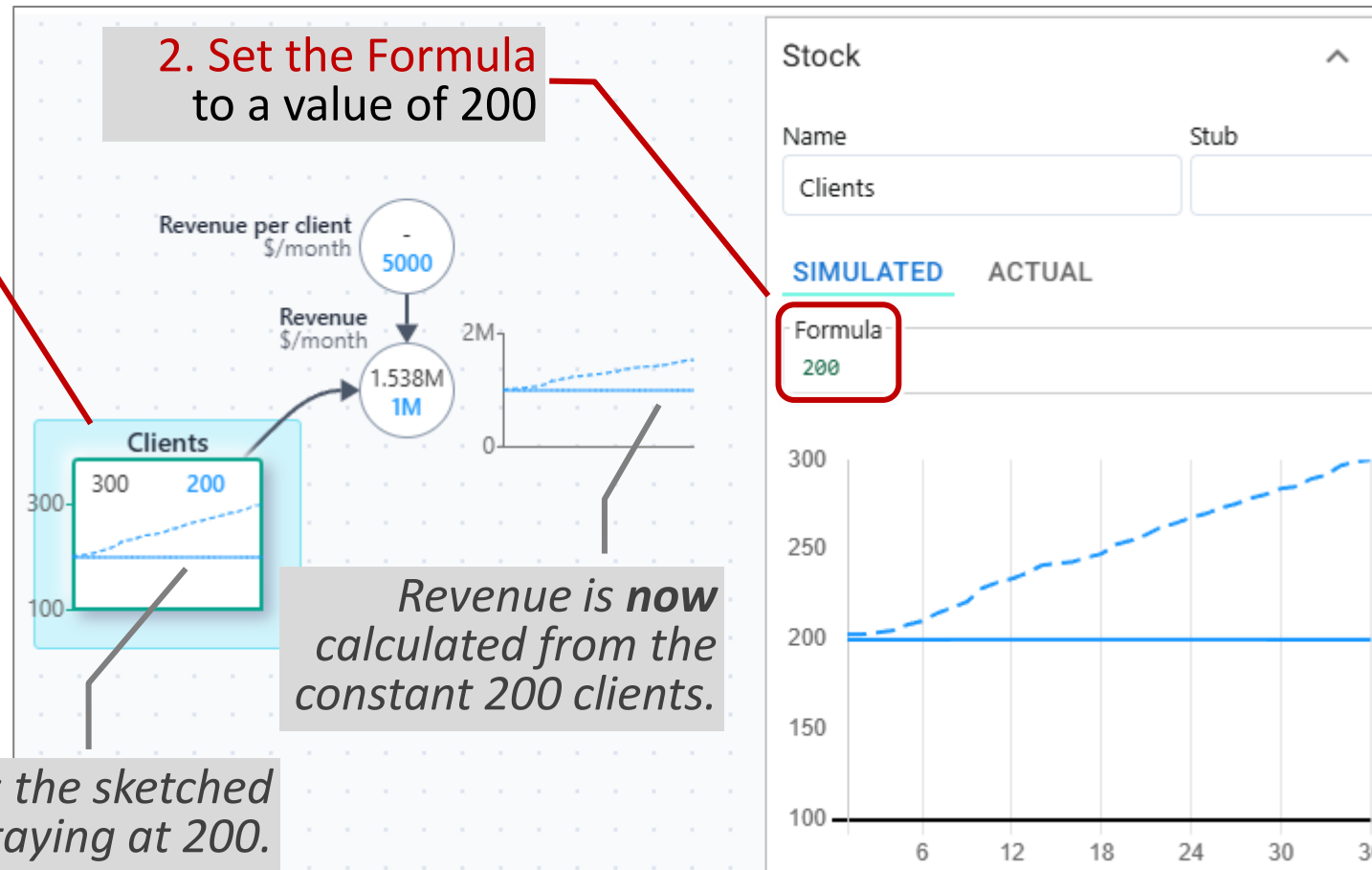


Why do we model? ... to **explain** real-world outcomes, so get Simulated values to **match** Actual values

Set the *initial* number of clients

1. Select the stock of 'Clients'

2. Set the Formula to a value of 200

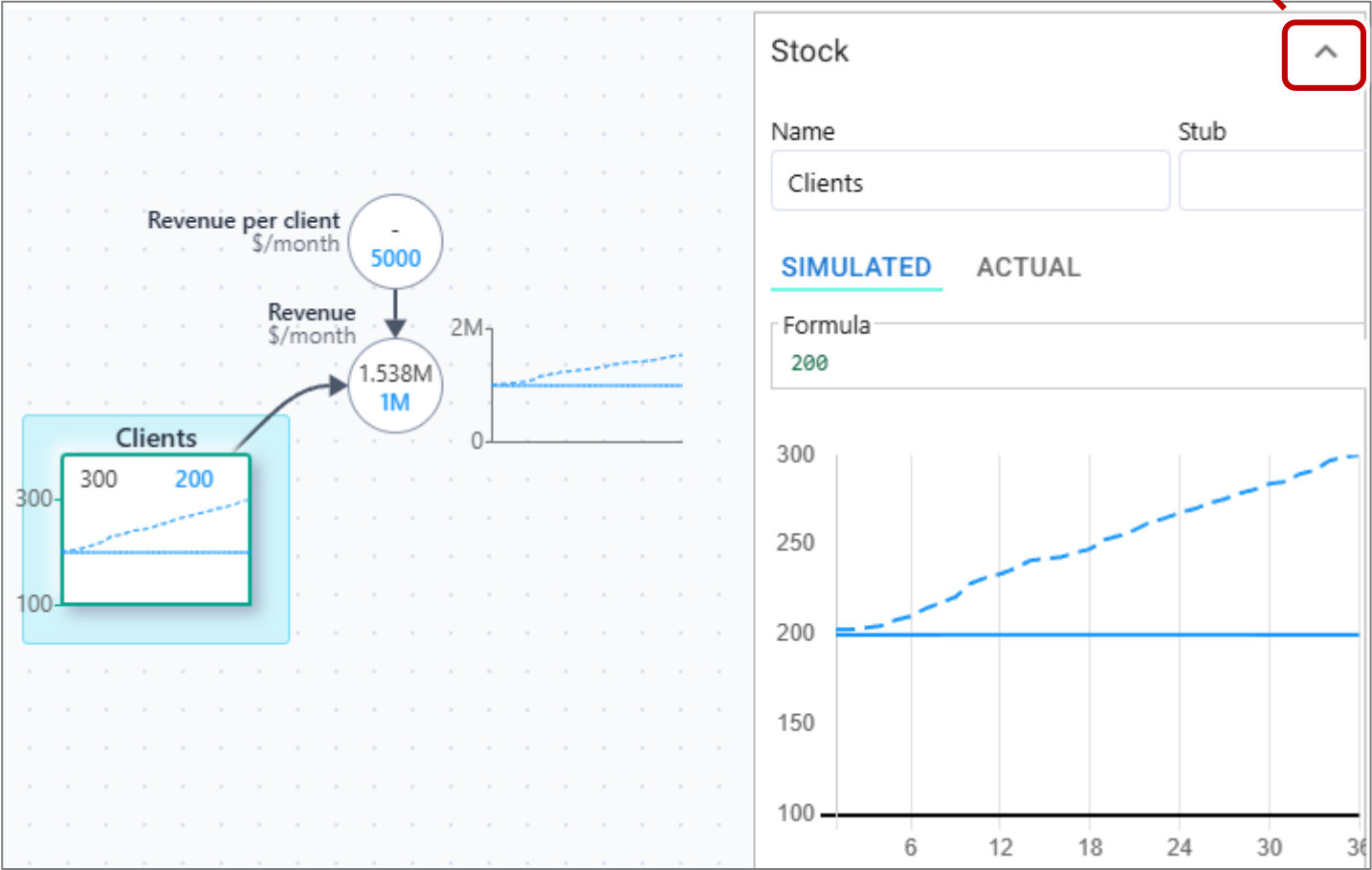


Any **Formula** always takes precedence over a sketch to determine the Simulated values.

Check the values for the number of clients

1. Click '^' to hide the Stock's settings

1. Click to reveal the Stock's data



Stock

Data

Simulated values are set by the Formula

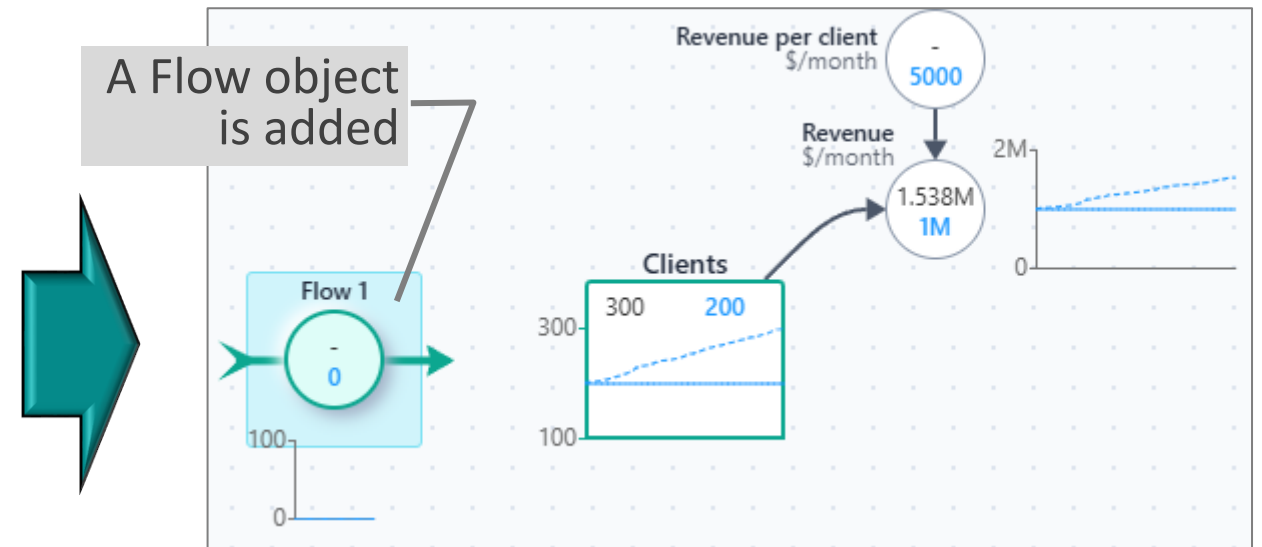
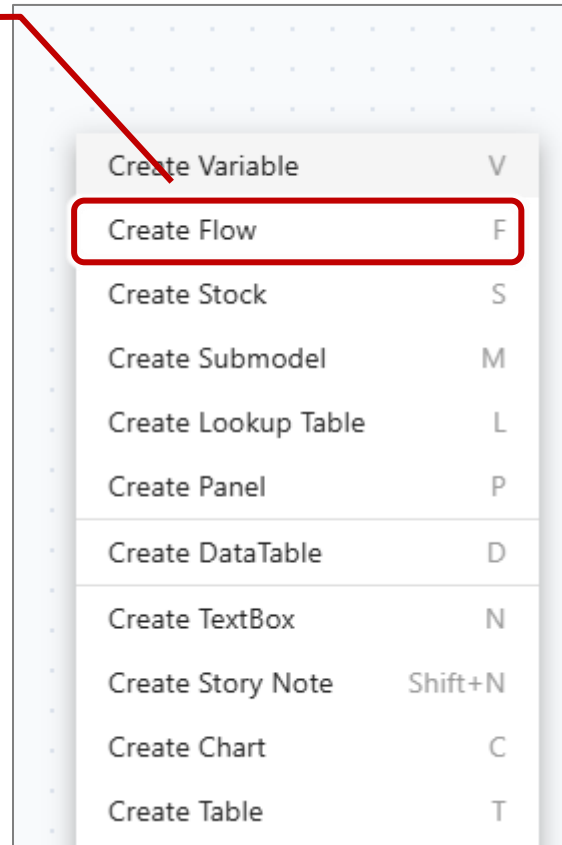
Actual values are still shown, for reference, but not used by the model

Stock		
Data		
	Simulated	Actual
1	200	202.9
2	200	202.9
3	200	203.9
4	200	205
5	200	208.2
6	200	210.3
7	200	214.6
8	200	217.8
9	200	221
10	200	228.5
11	200	231.7
12	200	233.8

Add a 'Flow' for how fast Clients grow

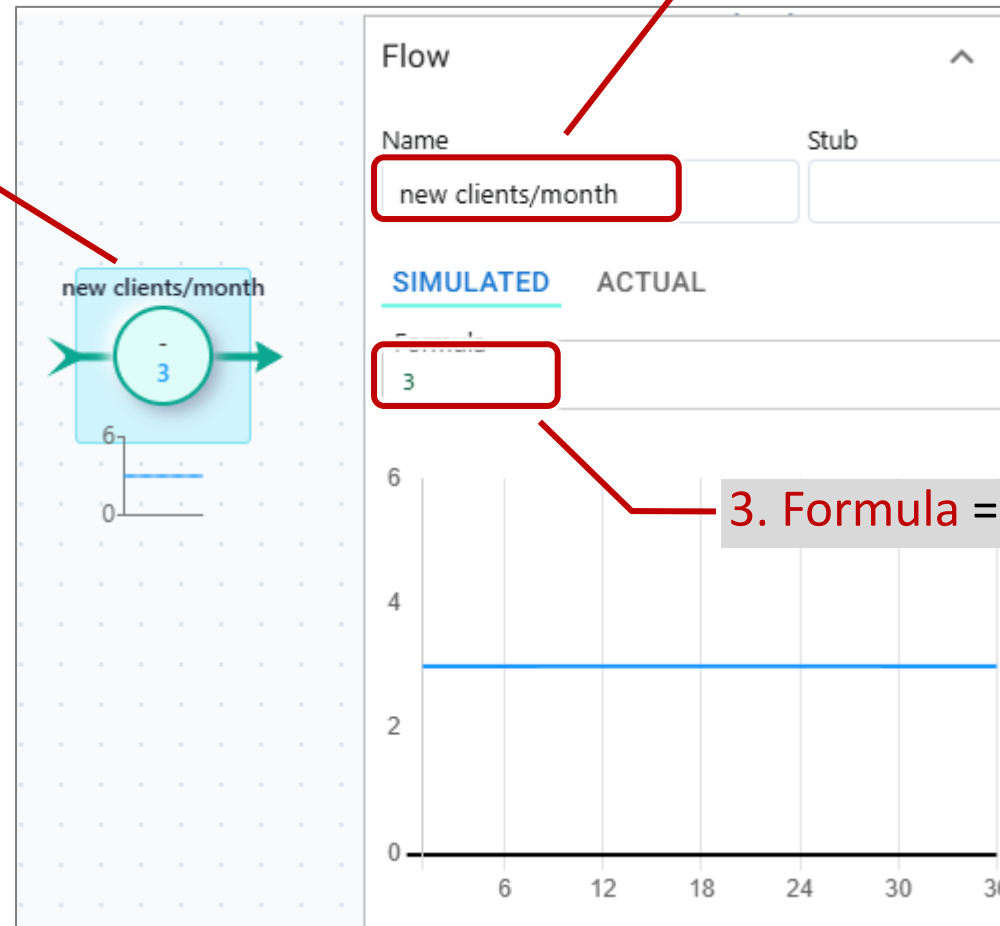
1. Right-click .. choose
'Create Flow'

... OR just hit 'F' to add a
Flow at this location



Add a 'Flow' for how fast Clients grow

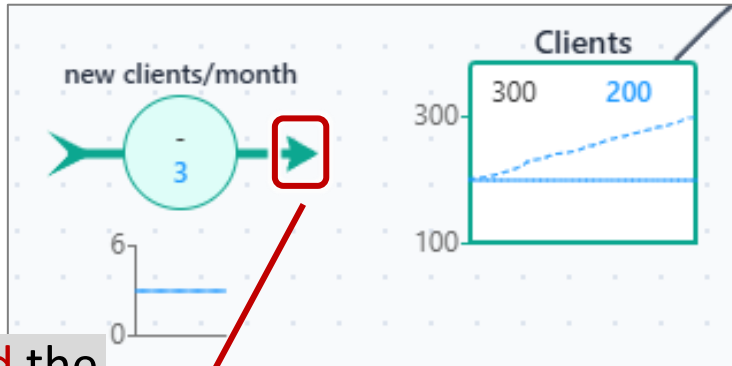
1. Select the Flow



2. Name the Flow

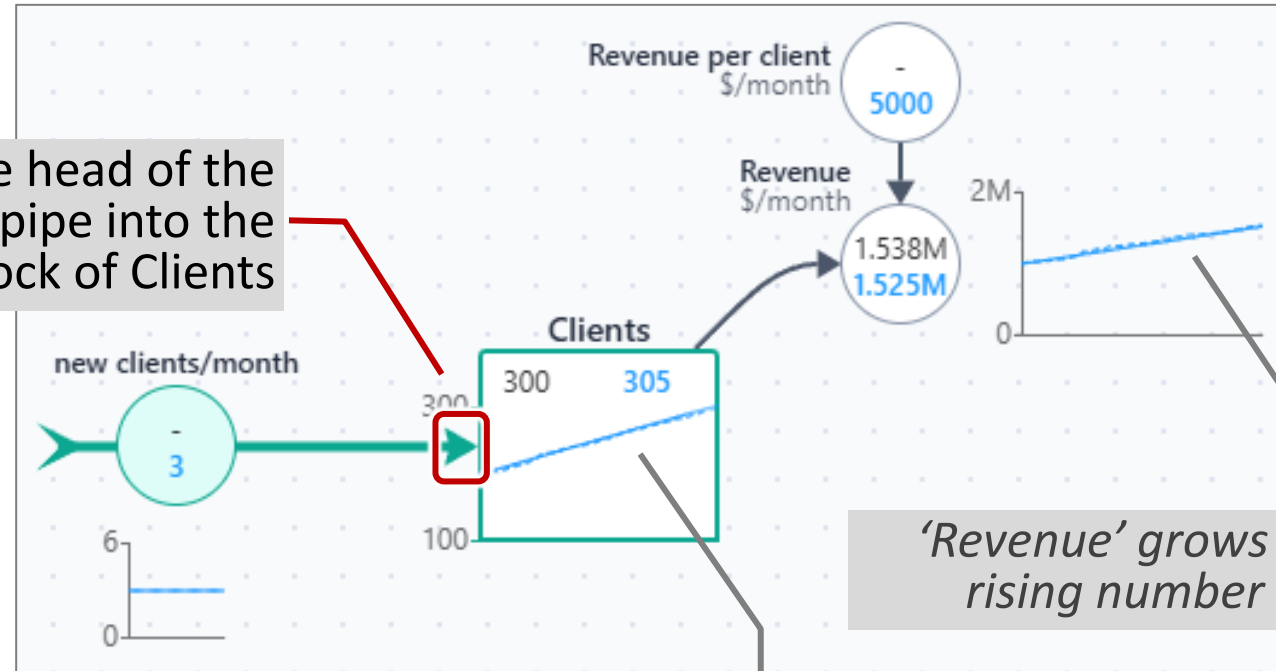
3. Formula = 3

Make the number of clients grow



1. Click-hold the arrow-head of the Flow's 'pipe'

2. Drag the head of the Flow's pipe into the stock of Clients



'Revenue' grows to reflect rising number of Clients

Starting month 1 with 200 clients, adding 3/month gives 305 clients at the **start** of month 36 (35 months later). There would be 308 clients at the **end** of month 36.

The Stock of Clients instantly grows by 3/month to 305

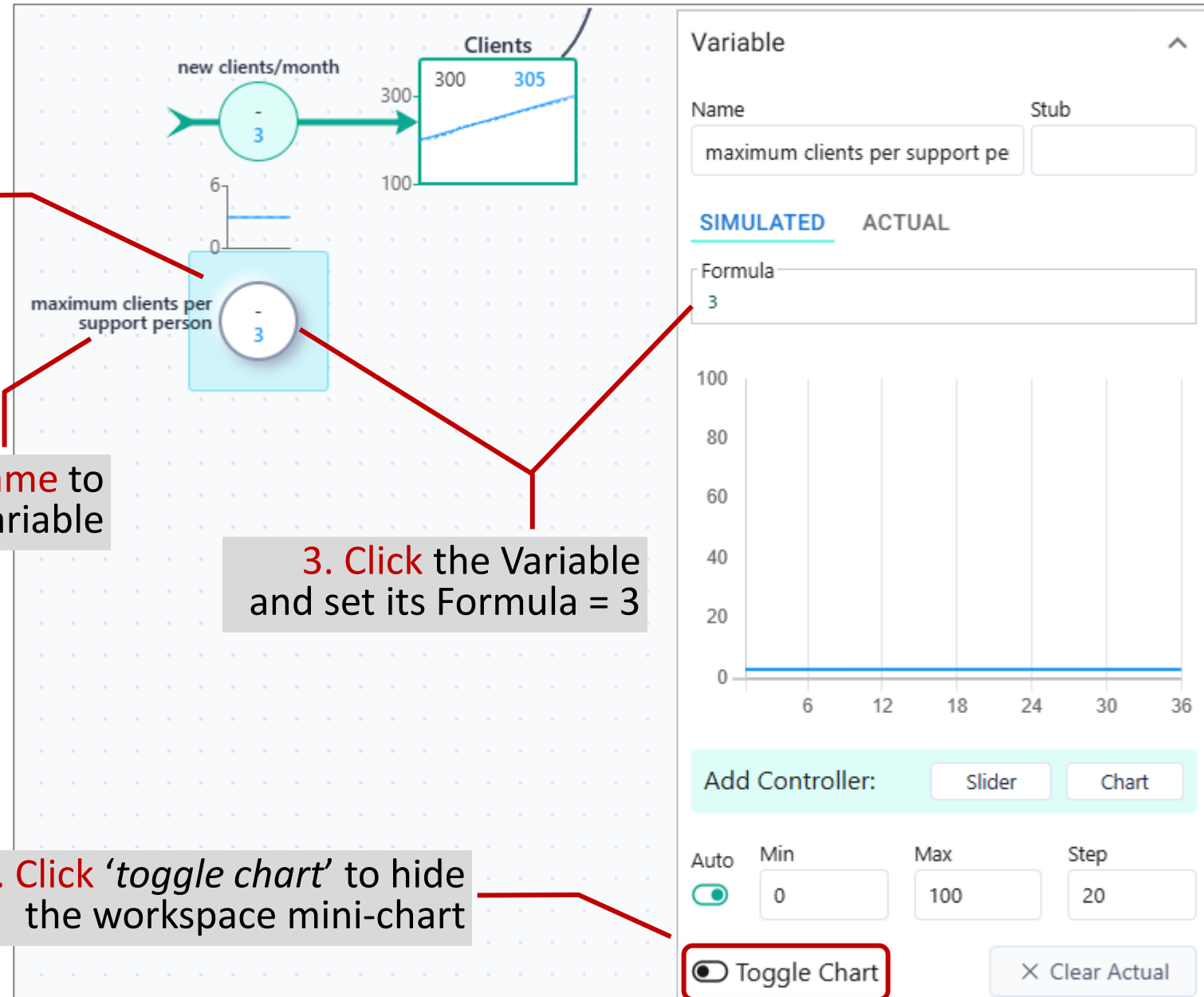
What minimum number of staff do we need?

1. Add a Variable
'maximum clients per support person'

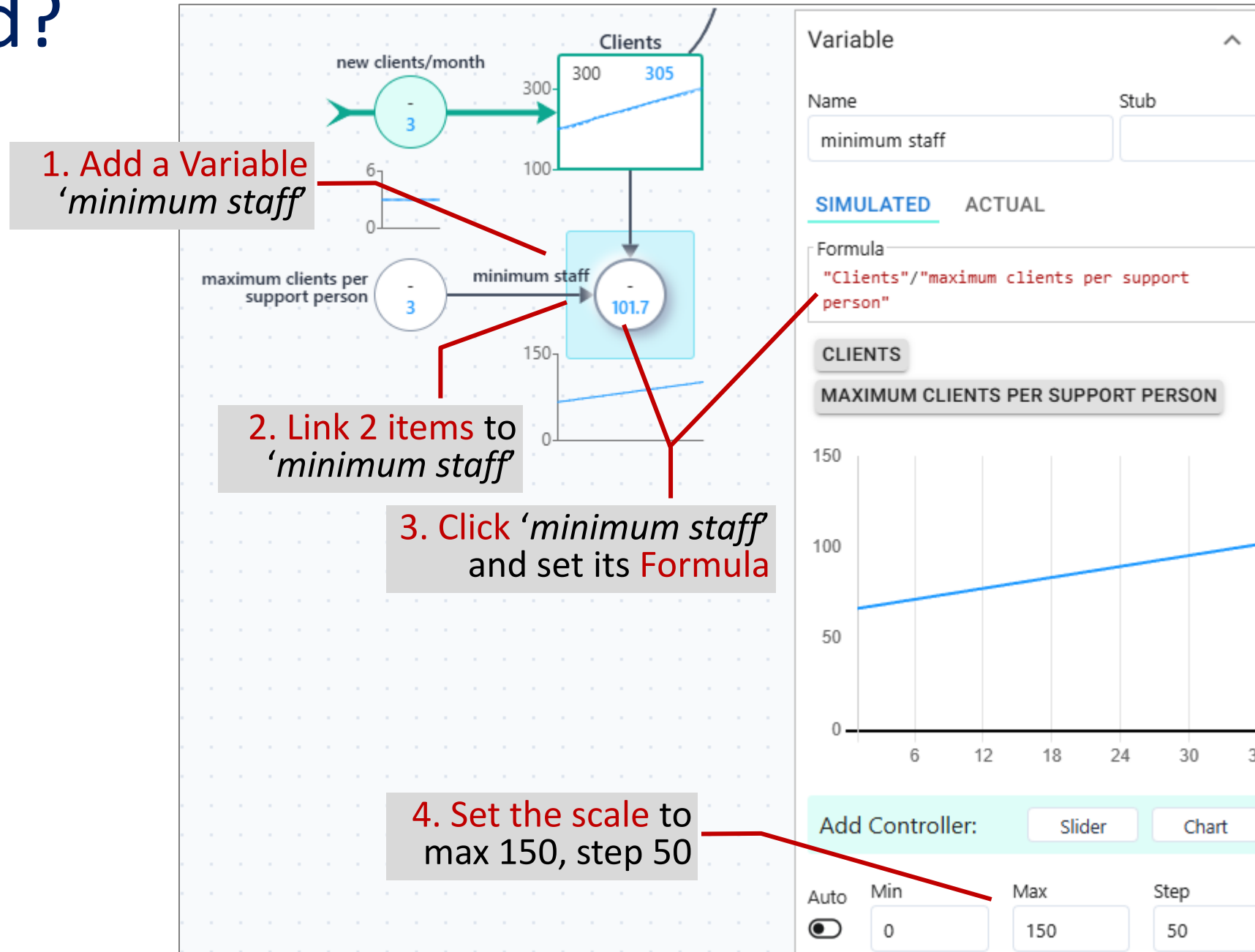
2. Drag the name to left of the Variable

3. Click the Variable
and set its Formula = 3

3. Click 'toggle chart' to hide
the workspace mini-chart



What minimum number of staff do we need?



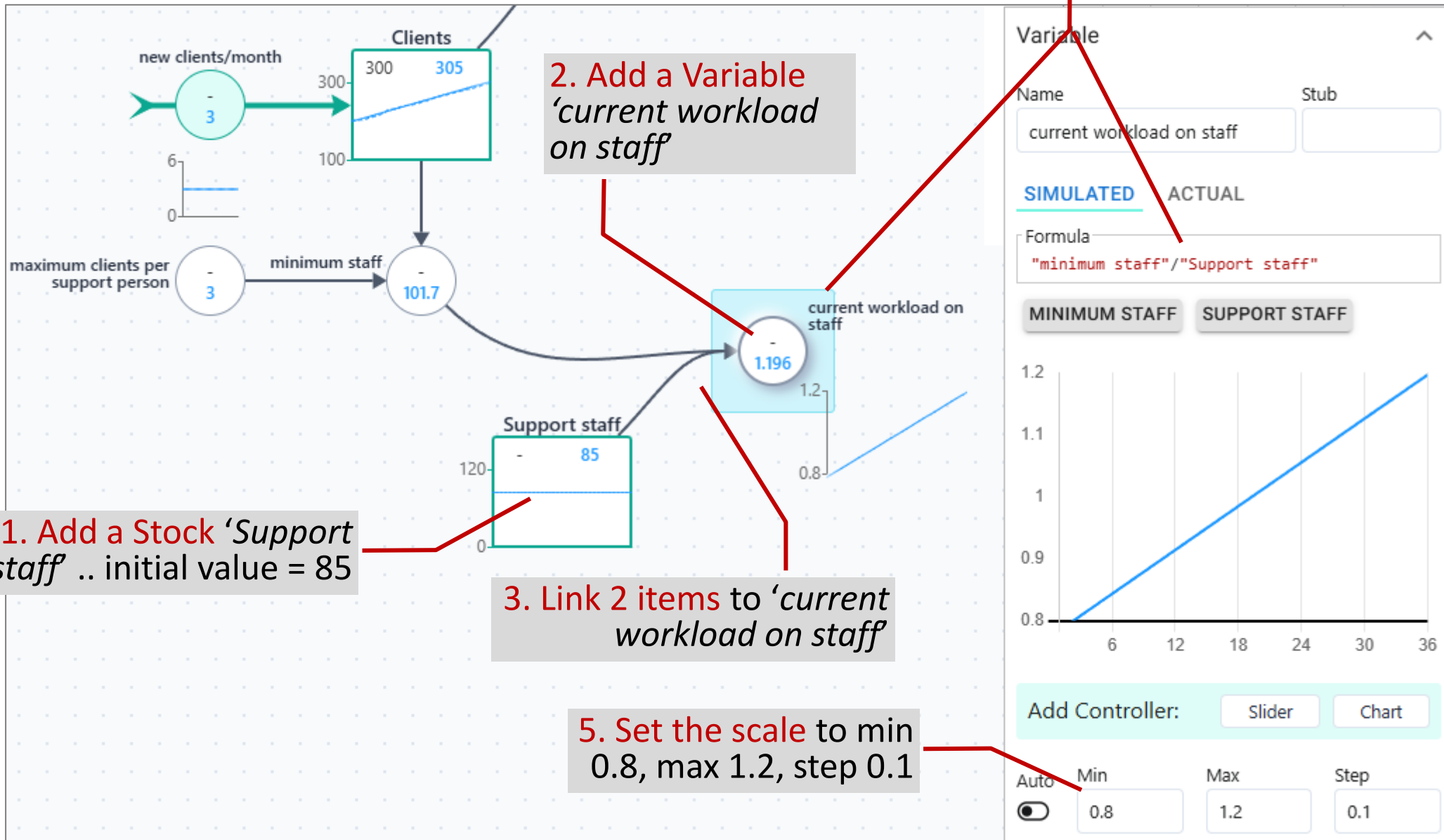
4. Click 'current workload on staff' and set its **Formula**

2. Add a Variable 'current workload on staff'

1. Add a Stock 'Support staff' .. initial value = 85

3. Link 2 items to 'current workload on staff'

5. Set the scale to min 0.8, max 1.2, step 0.1

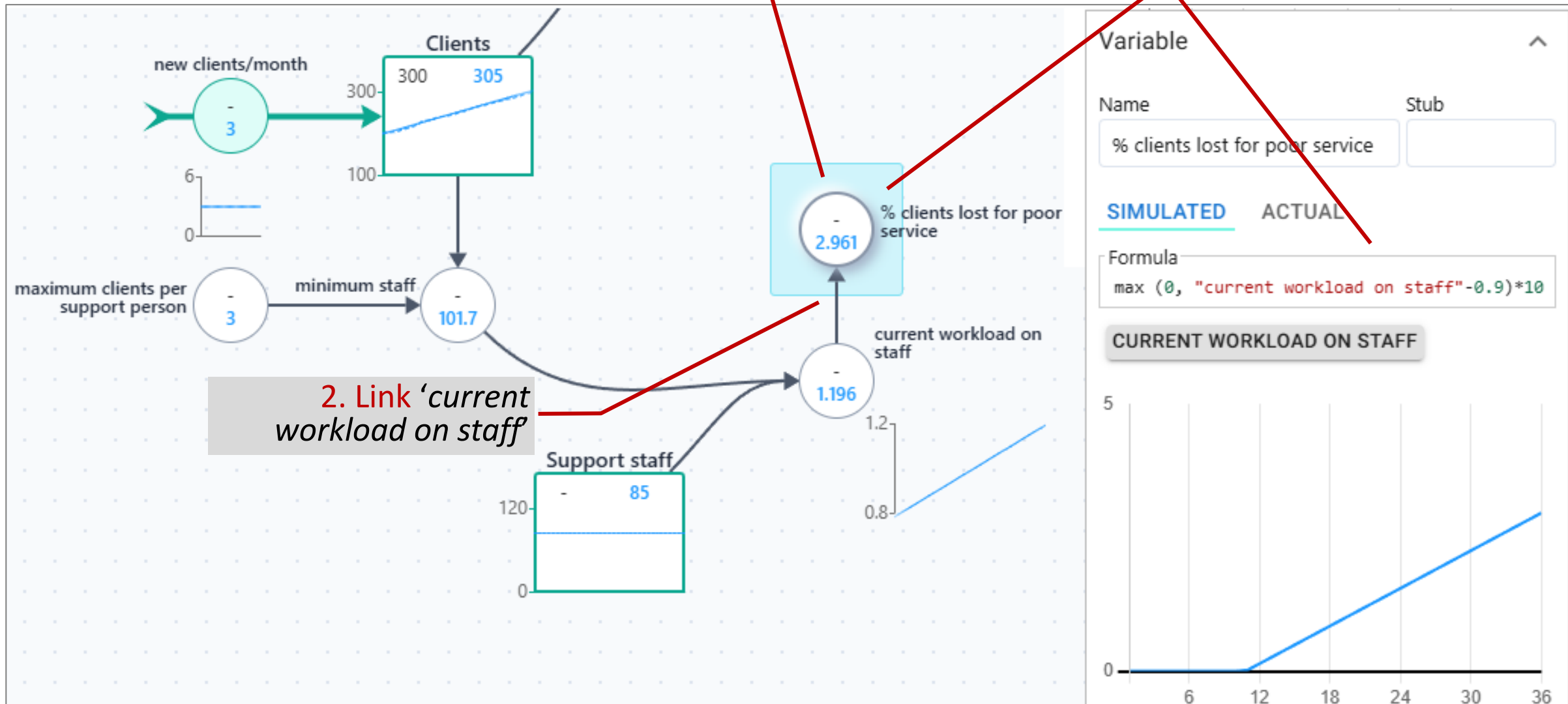


How does workload affect client losses?

1. Add a Variable '*% clients lost for poor service*'

3. Click '*% clients lost for poor service*' and set its **Formula**

2. Link '*current workload on staff*'

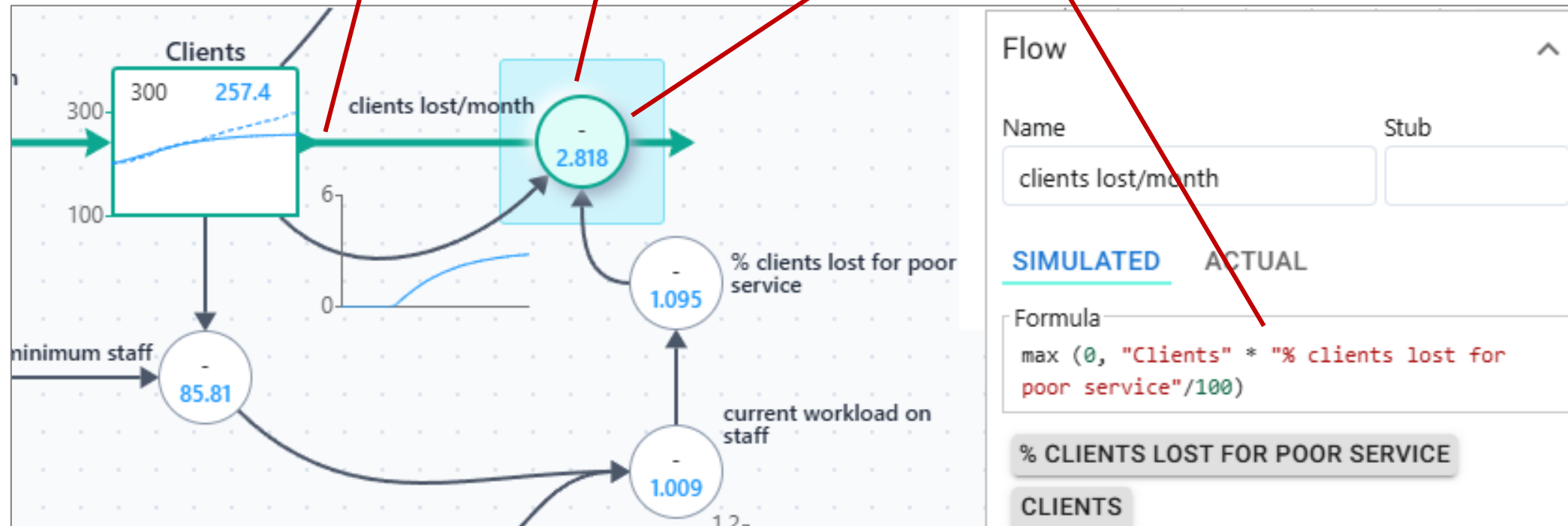


How fast do we lose clients?

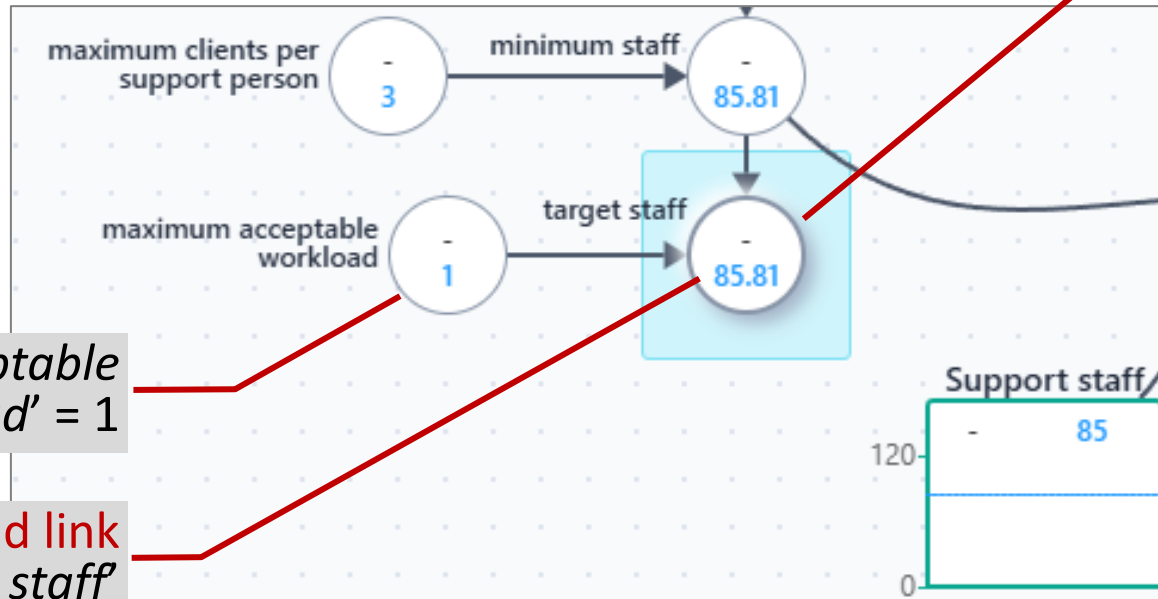
1. Add a flow 'clients lost/month'

2. Drag the Flow's tail into the 'Clients' Stock

3. Click 'clients lost/month' and set its Formula



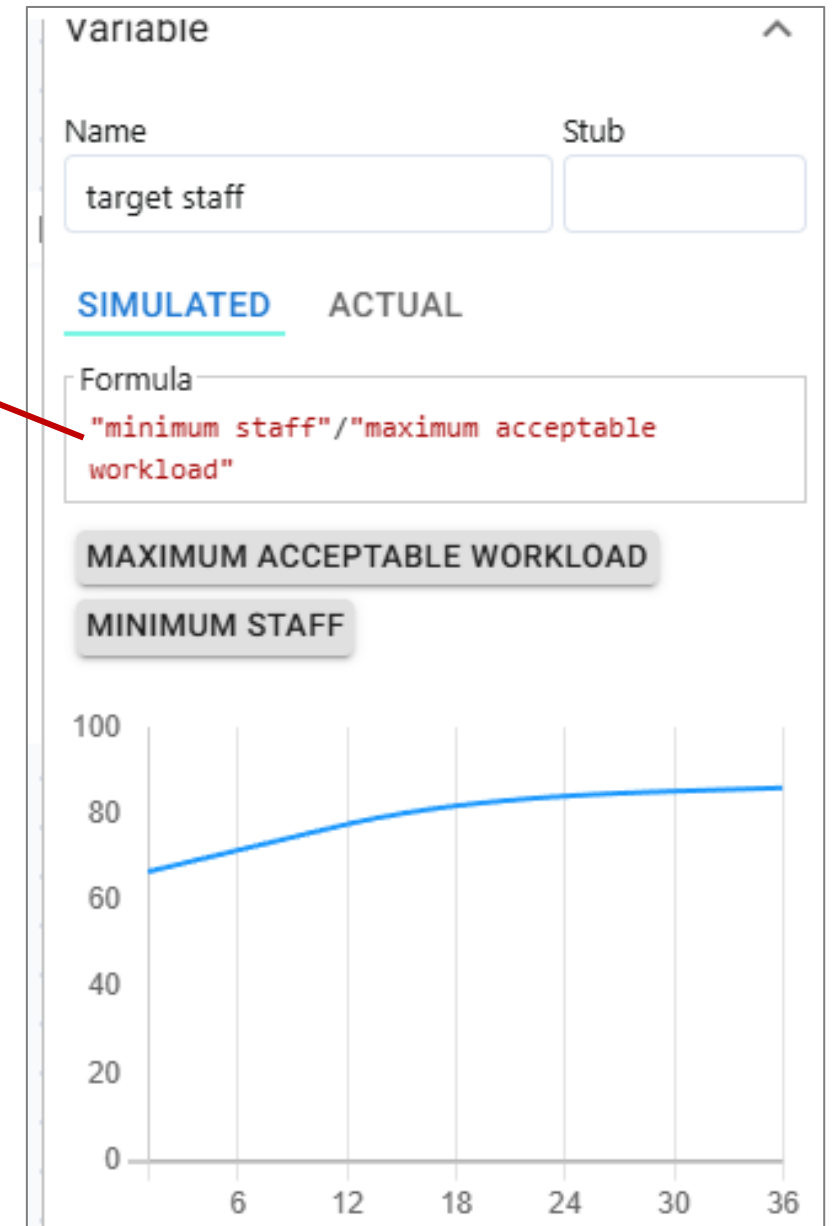
How many staff do we need?



1. Add 'max acceptable workload' = 1

2. Add and link 'target staff'

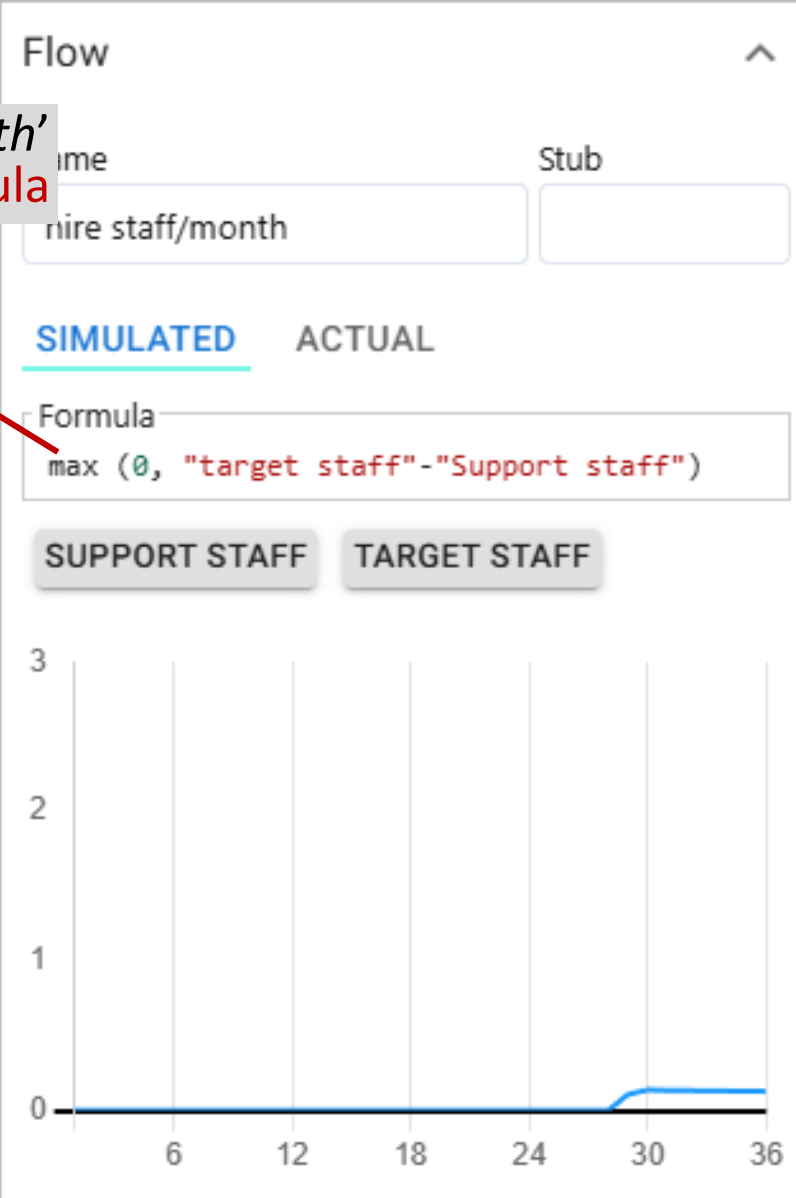
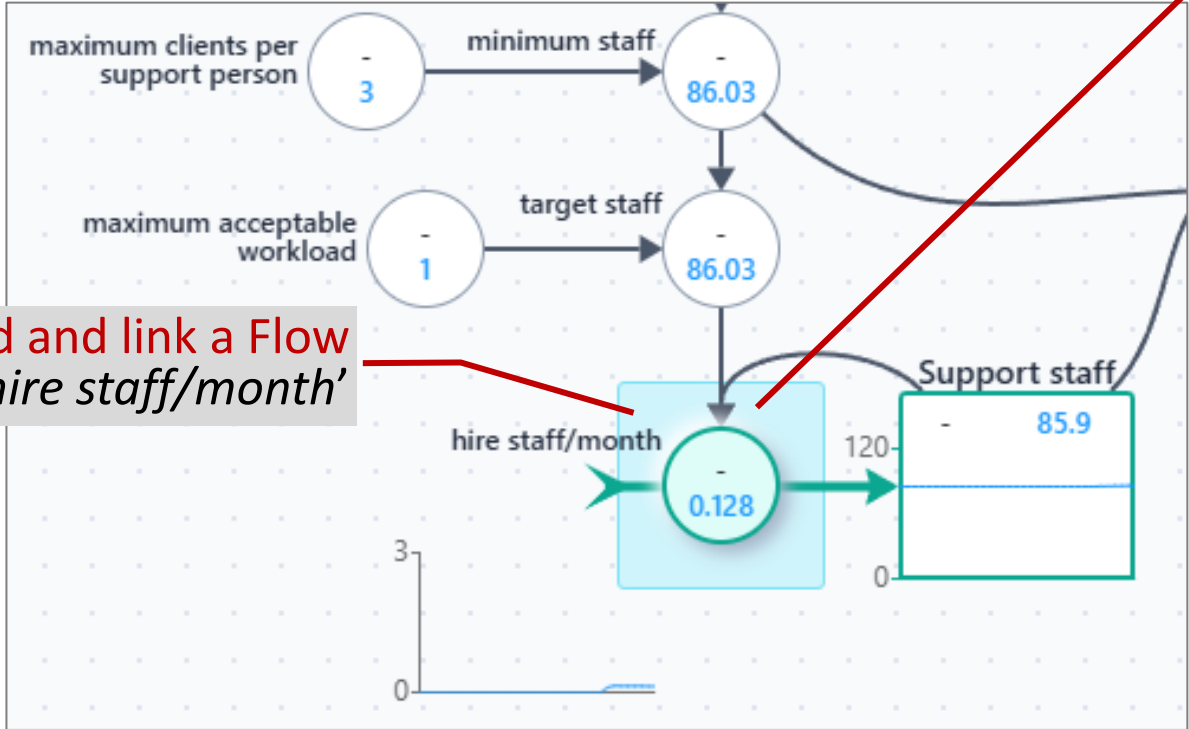
3. Click 'target staff' and set its Formula



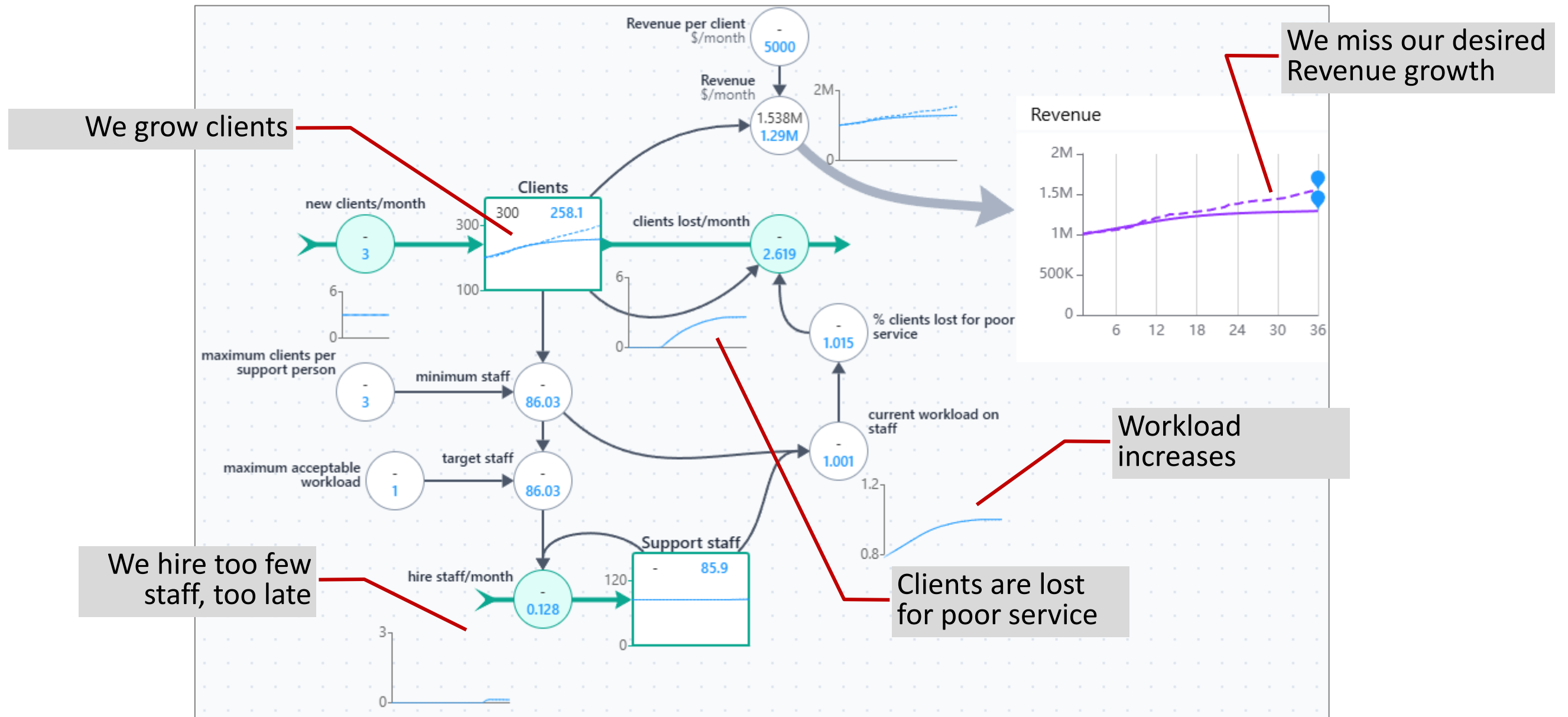
How many staff do we need?

2. Add and link a Flow 'hire staff/month'

3. Click 'hire staff/month' and set its Formula

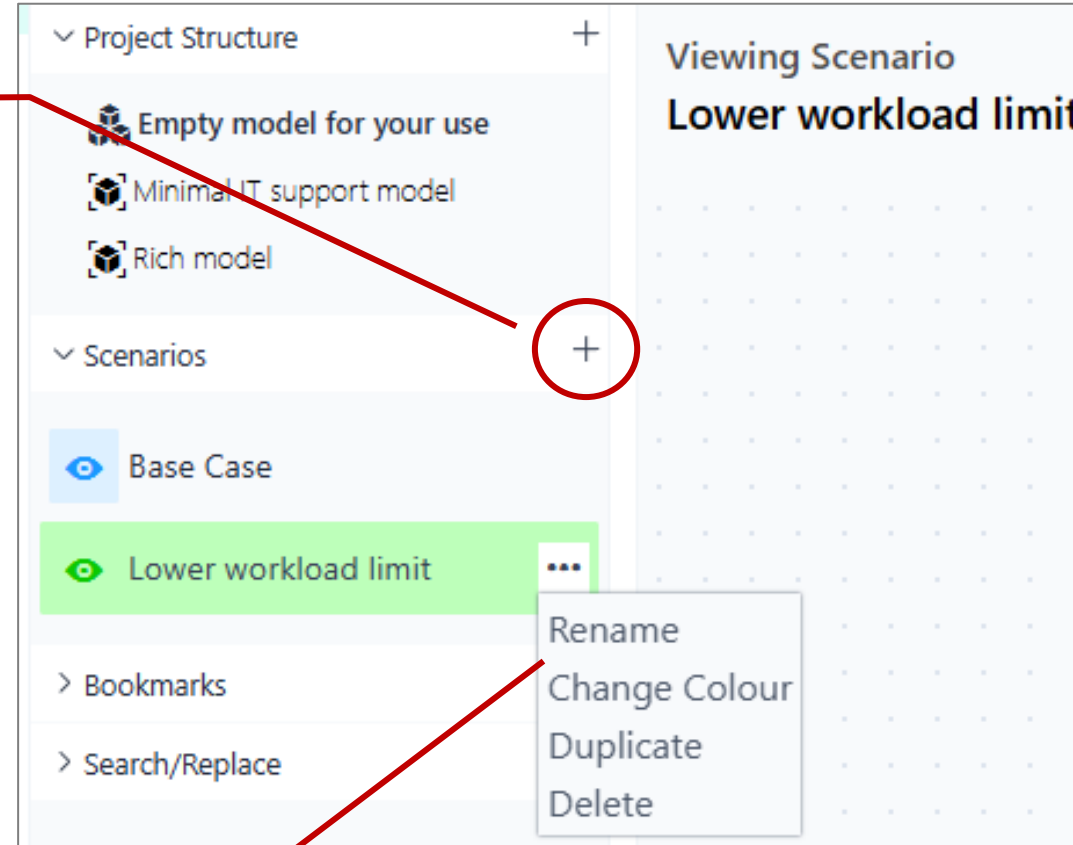


The working model ...



Create a scenario

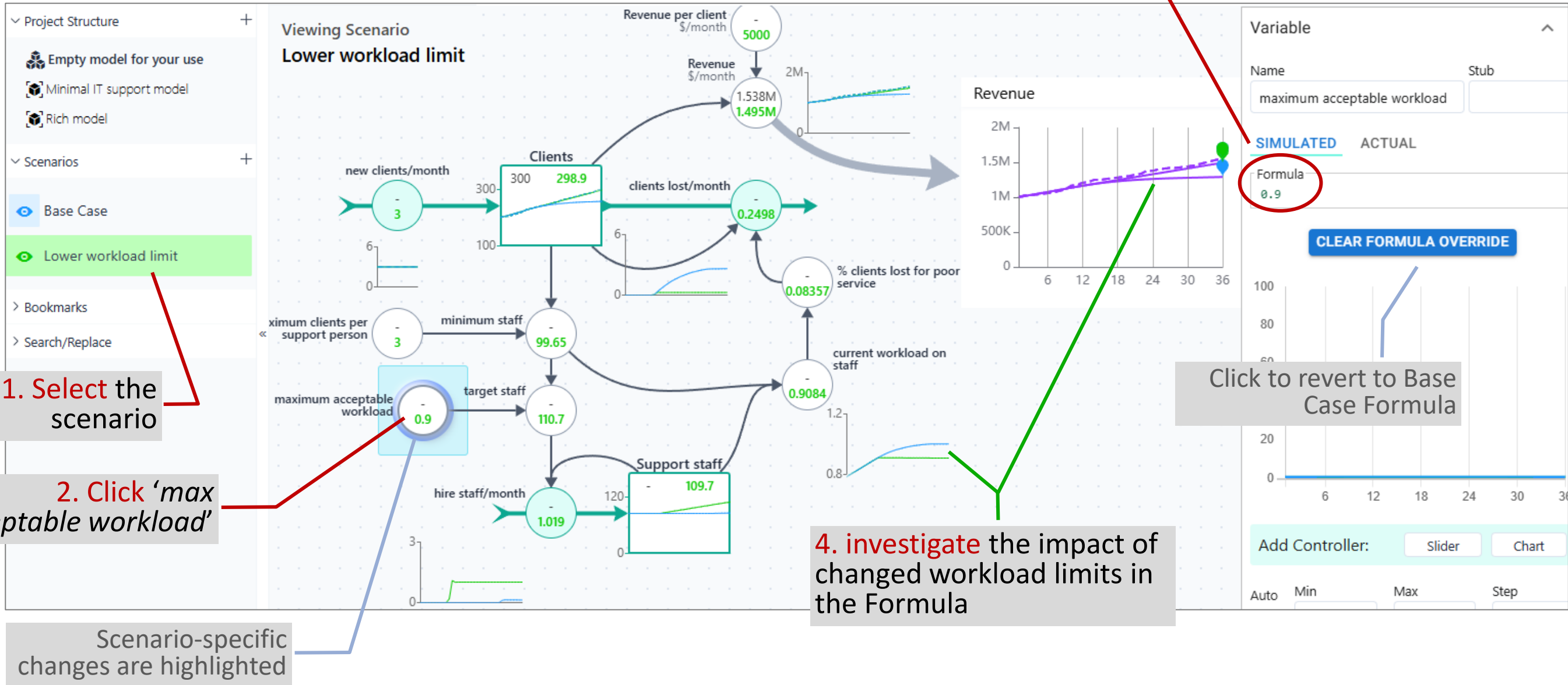
1. Click '+' to add a scenario



2. Click '...' to name the scenario and set its colour

Explore scenarios

3. Change the value for 'max acceptable workload'



“A model”

behaves as the real world behaves

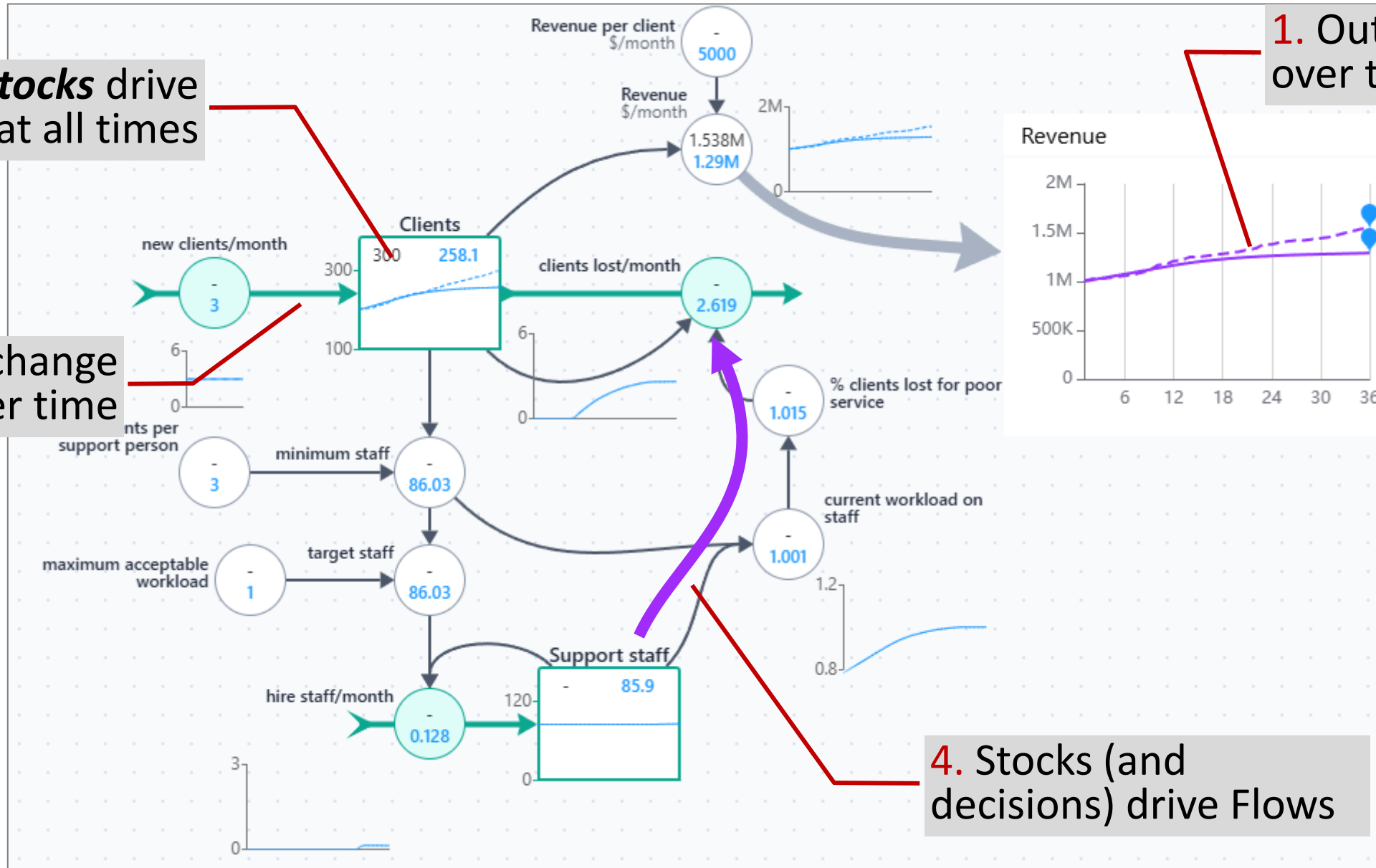
... and for the same ***reasons***

The 4-step logic and process...

2. **Stocks** drive outcomes at all times

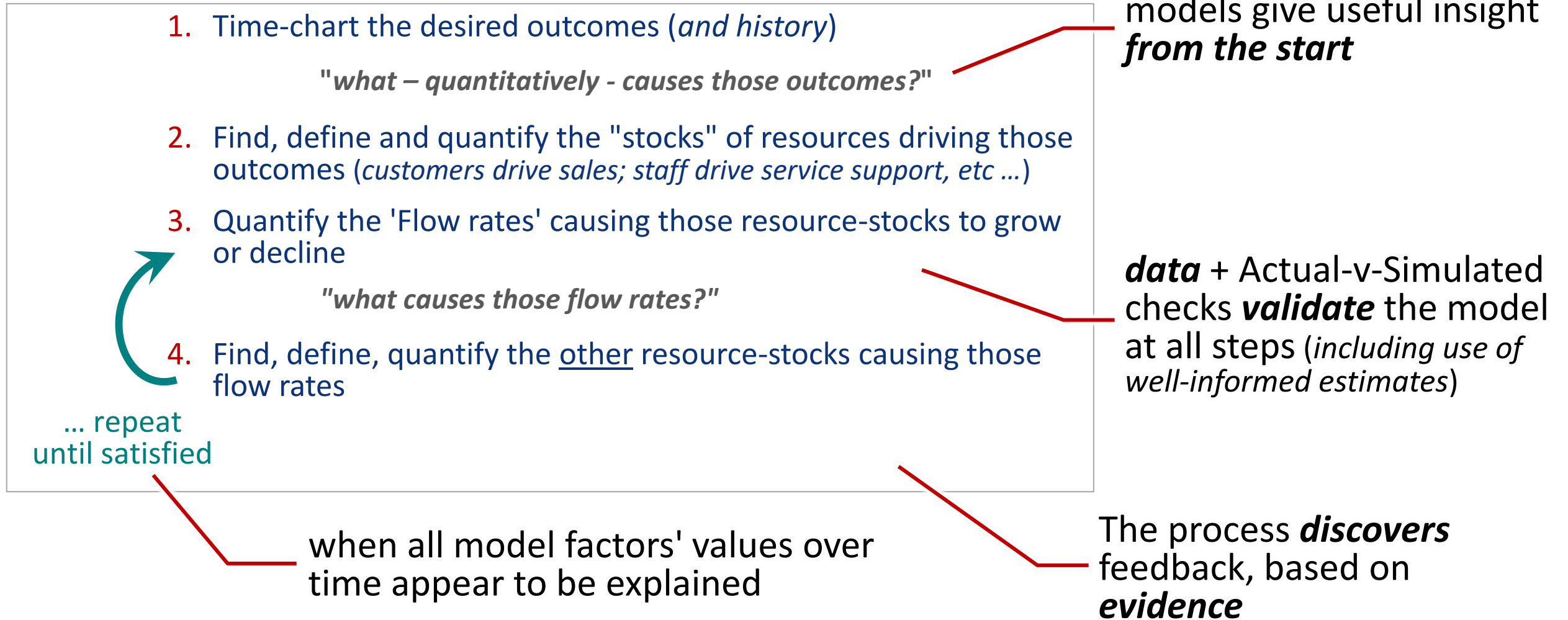
3. **Flows** change Stocks over time

1. Outcomes change over time



4. Stocks (and decisions) drive Flows

Benefits of the 'AgileSD' process we followed ...



For more on *good* policies for this IT support business ...

1. See the other models in the project

2. Watch how agentic-AI leads to the self-managing enterprise ... sdl.re/AIshowITS

