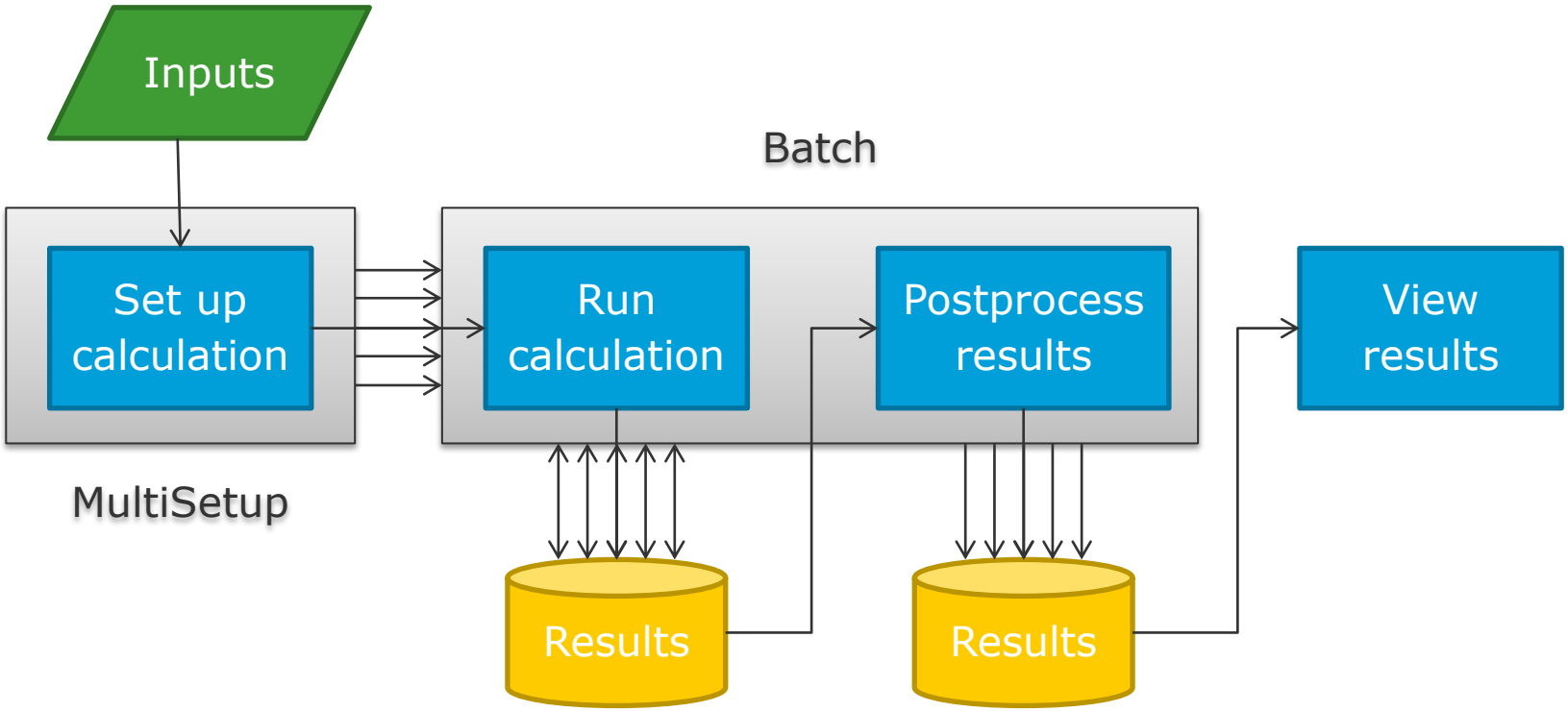
Scripting API

A different way of using Bladed

SAFER, SMARTER, GREENER

What does Bladed do?



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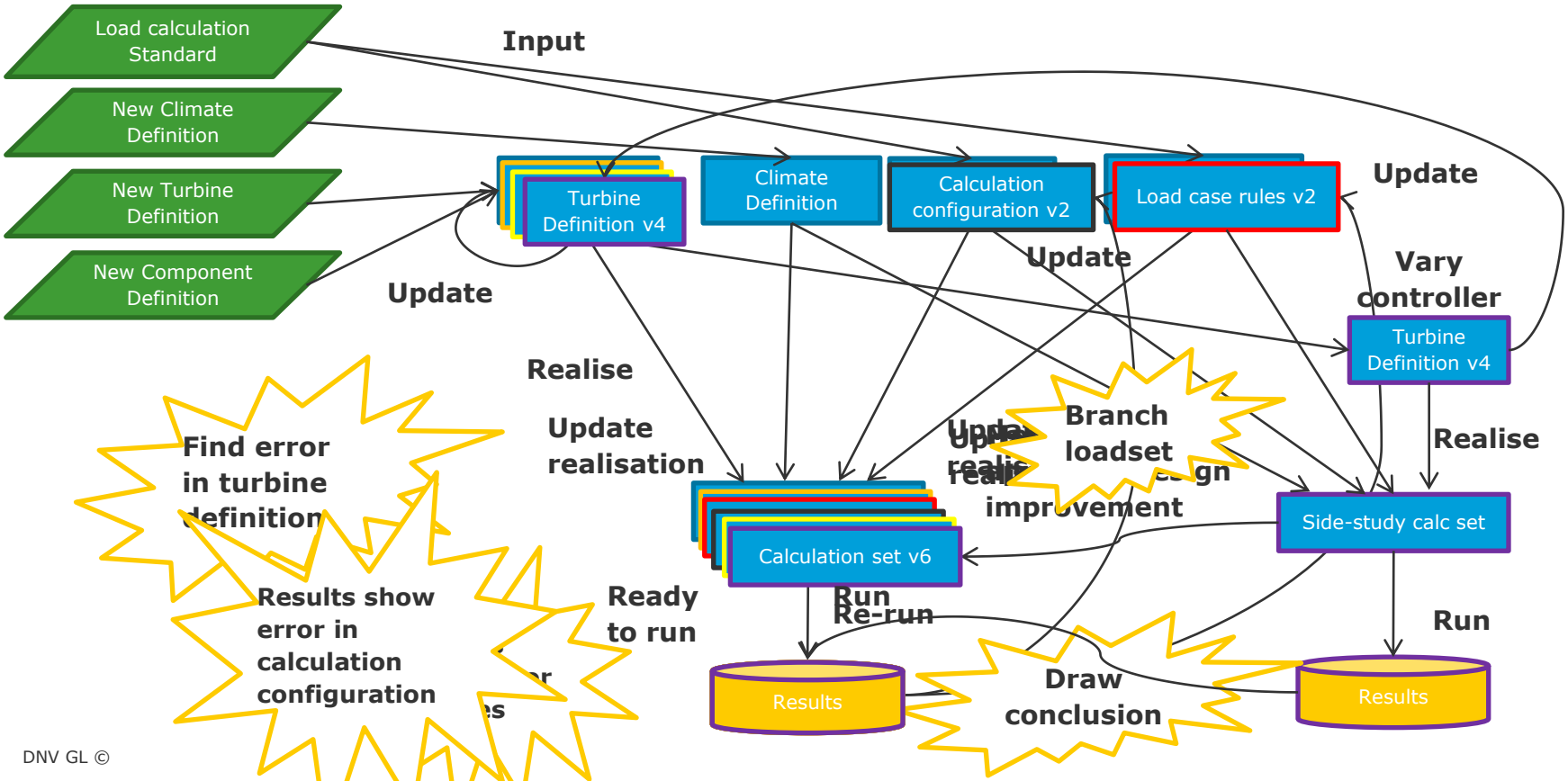
A realistic process of Load Calculations

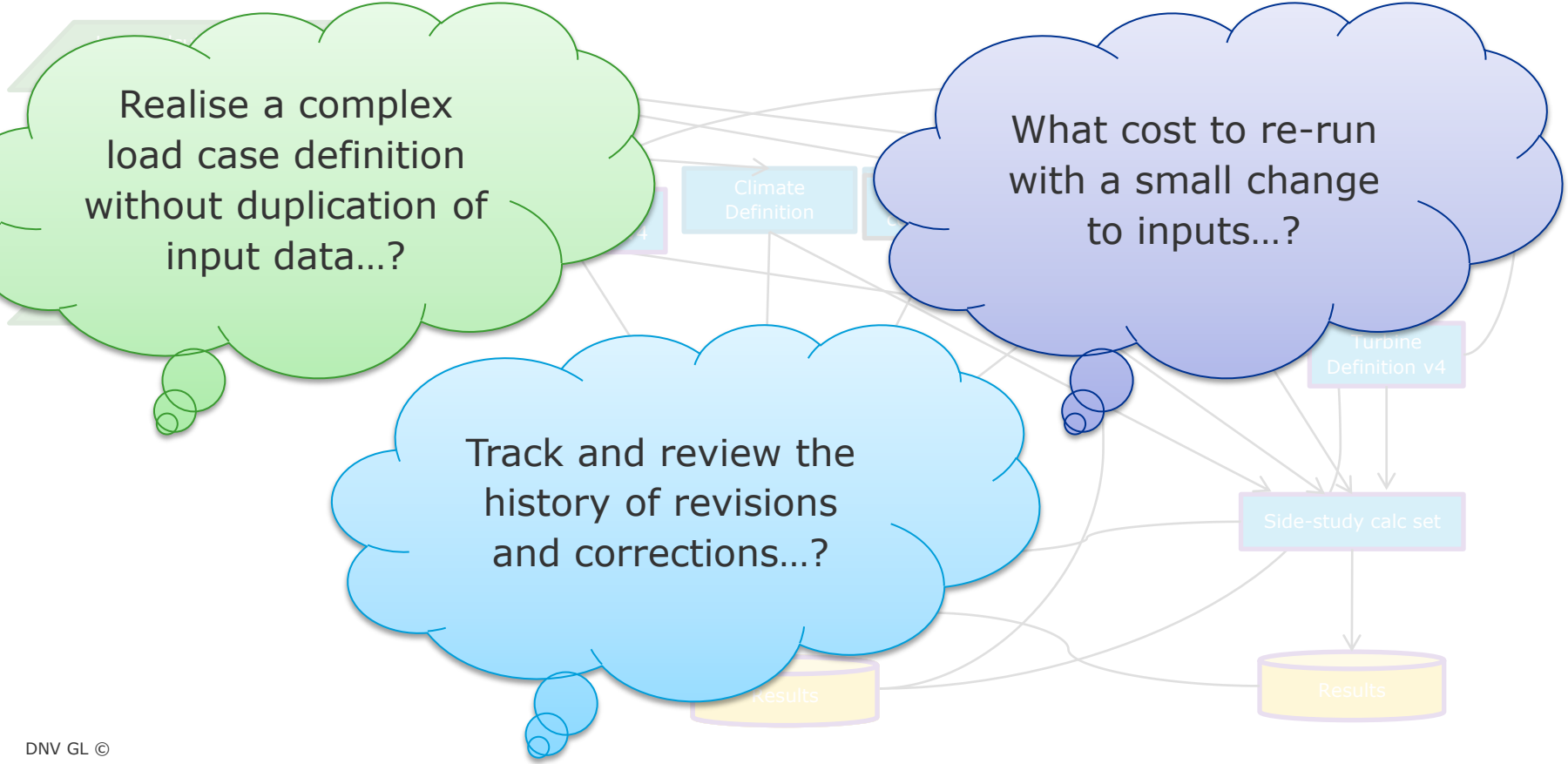


A realistic process of Load Calculations

Realise a complex load case definition without duplication of input data…?

What cost to re-run with a small change to inputs…?

Track and review the history of revisions and corrections…?



Introducing the **Scripting API**

A new feature for Bladed 4.8

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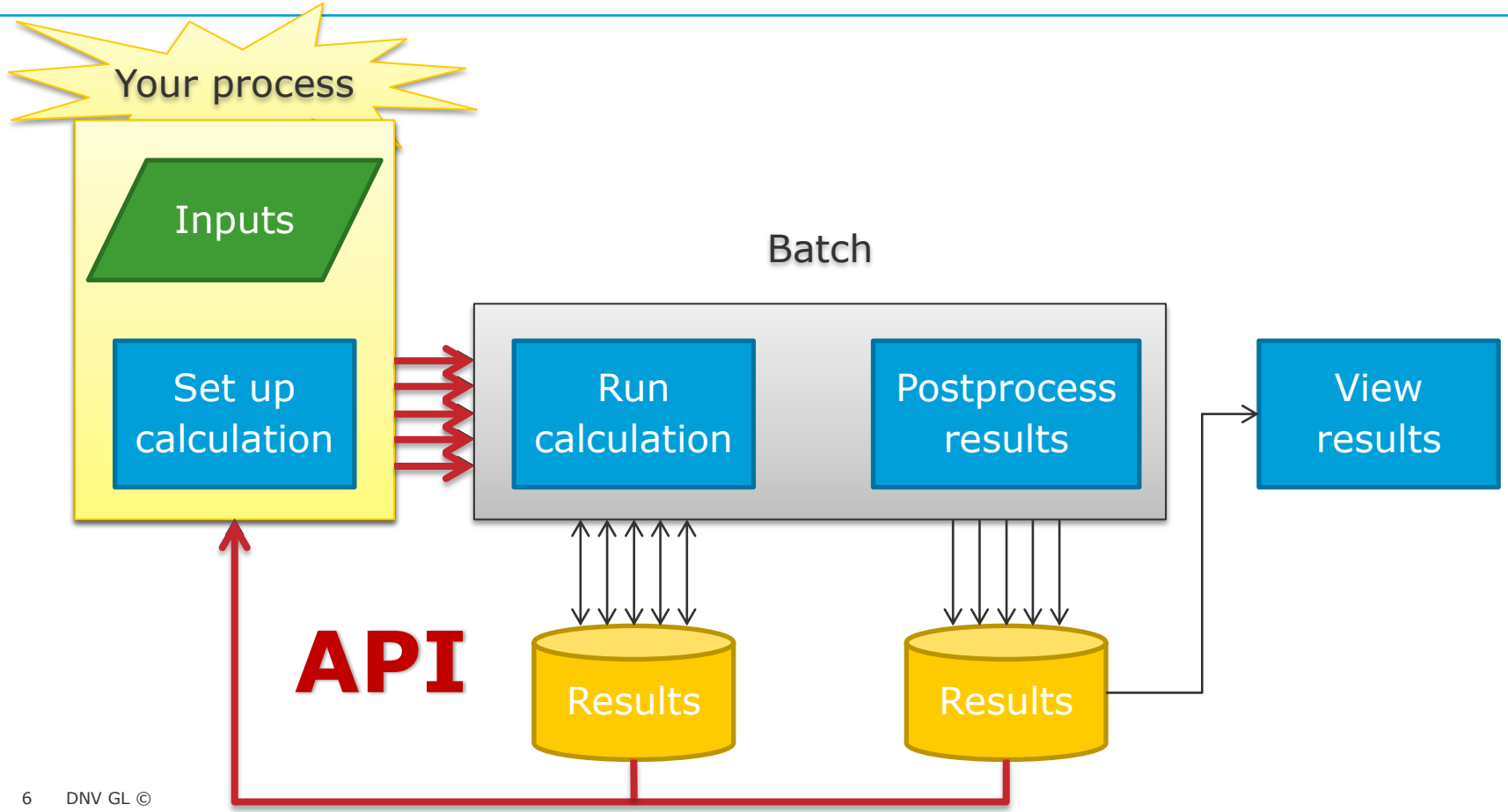

Your process
Inputs
Set up calculation
Batch
Run calculation
Postprocess results
View results
API
Results
Results

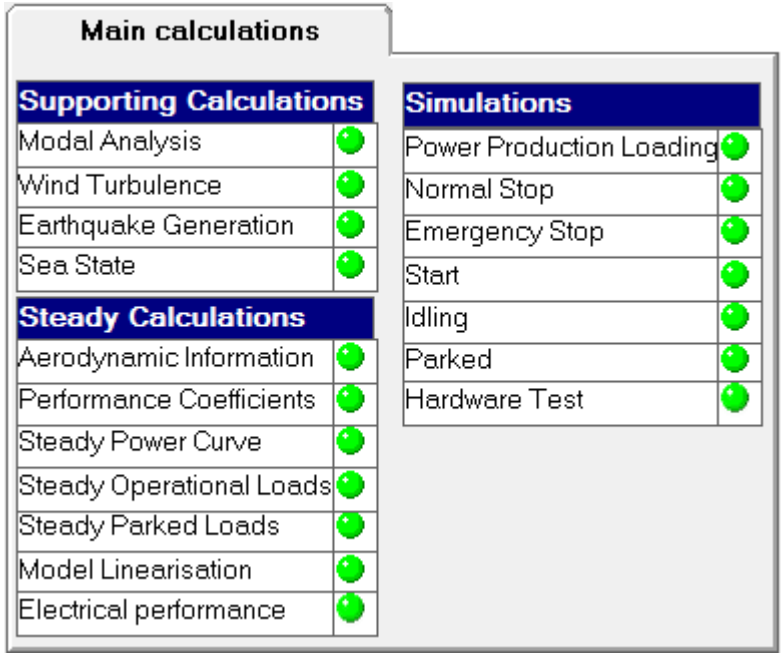
Your process? - write a Python script

Bladed 4.8 will be shipped with instructions and examples for Python scripting

Bladed 4.8 API features

API will support **running the "Main calculations"**:

- Define variations from a base project
- Review variations defined
- Submit jobs to a Batch List
- Replace jobs in a Batch List
- Control Batch – start / wait for completion
- Load calculation results into the script



Bladed 4.8 API features

API will support setting up environmental conditions according to the design standards

- **hard-coded data** and **equations**

Example scripts will show how to set up common design load cases.

Python script example

demo.py.txt

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Bladed 4.8 API features

Scripting allows you to set up calculations <u>however you want</u>

- Many scripts can all use central input data
- Scripts can re-use common functions

Bladed 4.8 API features

Scripting allows <u>convenient</u>
"edit then one-click re-run"

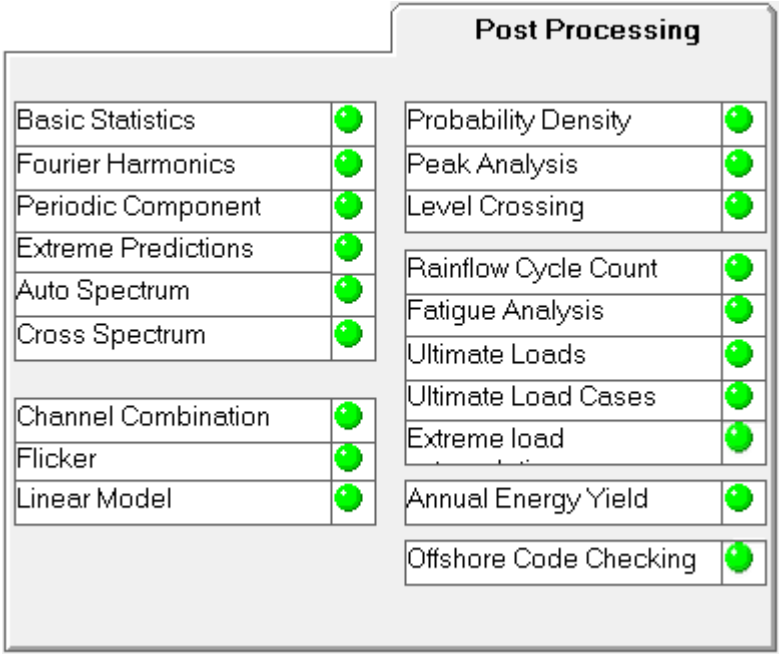
Beyond Bladed 4.8

Scripting API

Beyond Bladed 4.8 – Scripting API

PostProcessing calculations

- Run in batch
- Call directly from script



Beyond Bladed 4.8 – Scripting API

The API will re-run only the affected calculations

✓ Save on calculation time (cost)

Beyond Bladed 4.8

Calculation Set Management

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Beyond Bladed 4.8 – Calculation Set Management

Bladed will track the history of revisions to the project

- Each revision – clear extent, timestamp, explanation logged
- ✓ Easier to check - more thorough checking possible
- ✓ Higher quality

Track and review the history of revisions and corrections…?

Scripting API

A different way of using Bladed

Thank you.

1. Who likes editing Bladed .$pj files?

2. Who is already scripting?

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