



Virscidian

Virscidian Introduction

Leading Data Analysis and Informatics Company



Drug Discovery Software-enabled Synthesis to Registration & HTS Screening Workflows



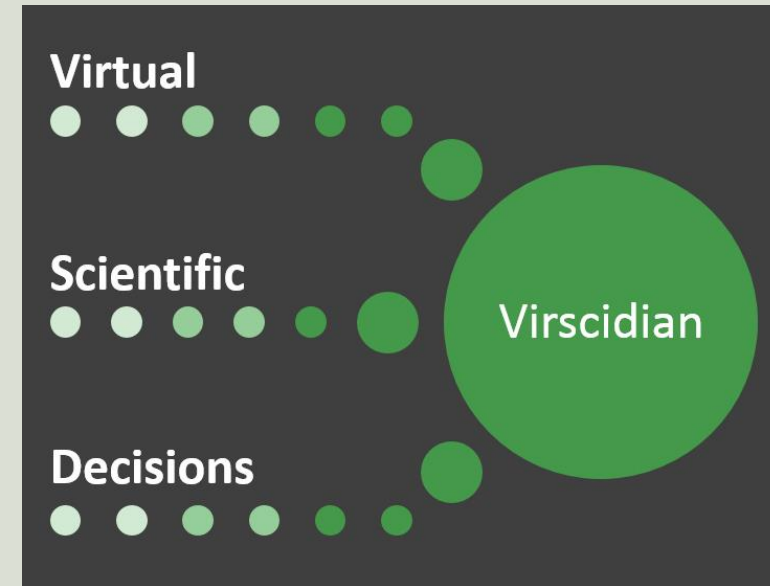
End-to-end analytical software solutions that mimic and extend your natural laboratory workflows



Desktop and enterprise products developed for high to low sample throughput workflows



Best in class workflow driven LC/MS Automated data processing, results creation, review-by-exception



Now part of...

Dotmatics +  Virscidian

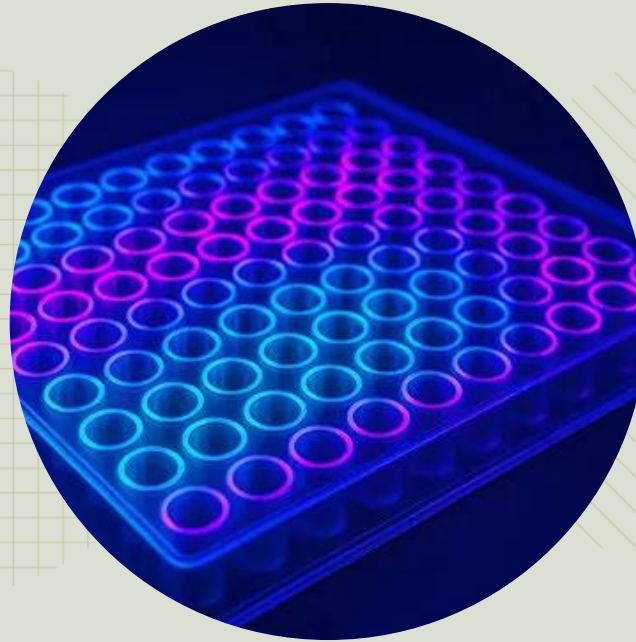
Dotmatics + Virscidian

Better Together!

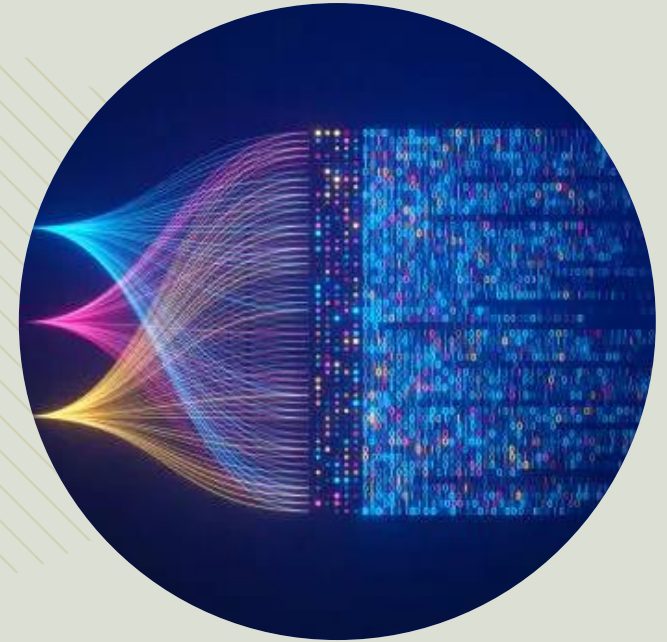
Combined strengths provide a more complete, end-to-end solution for HTE and other workflows



**Dotmatics
Luma Platform**



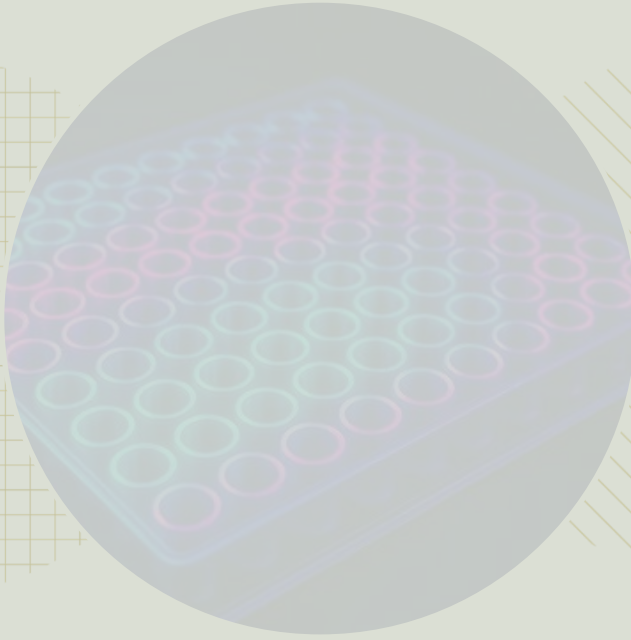
**Experiment
Builder**



**Workflow
Automation**



Dotmatics
Luma Platform



Experiment
Builder



Workflow
Automation

ALL YOUR INSTRUMENTS &
TERABYTES OF DATA

DATA READY FOR
ANYTHING





Luma Lab Connect

Eliminate silos across
multimodal data and
departments

- Automate real-time flow of lab instrument data into Luma
- Parse hundreds of instrument data formats and file types
- Low-Code, easily extensible functionality
- Highly structured data

Summary

INSTRUMENTS
1,560

UPLOADS
12.38 B

SIZE
277.66 TB

Export Summary

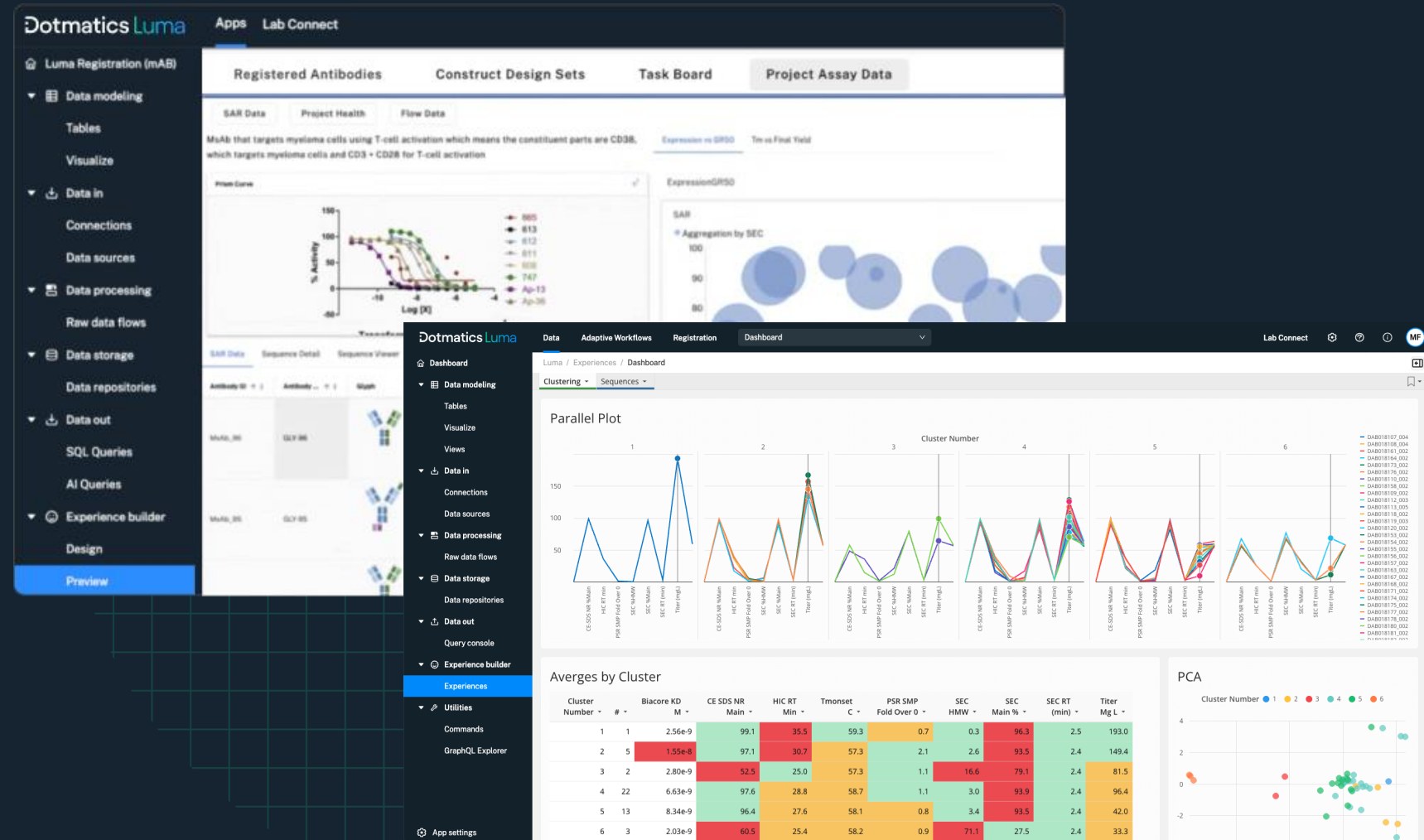
Search

Instrument	Uploads	Size	Platform	Last Sync
▶ LCMS	25,304	425 GB	📁	2 minutes ago
▶ WebUploads	48,329	476 GB	📁	5 hours ago
▶ md5-anastasia	35,482	195 GB	📁	7 hours ago
▶ Bruker NMR	18,327	724 GB	📁	Yesterday at 8:45 PM
▶ CellCelector	90,529	1.5 TB	📁	Yesterday at 2:08 PM
▶ Incucyte	172,826	12.2 TB	📁	Yesterday at 6:28 AM

Luma – Dashboards

See all relevant data that matters to you

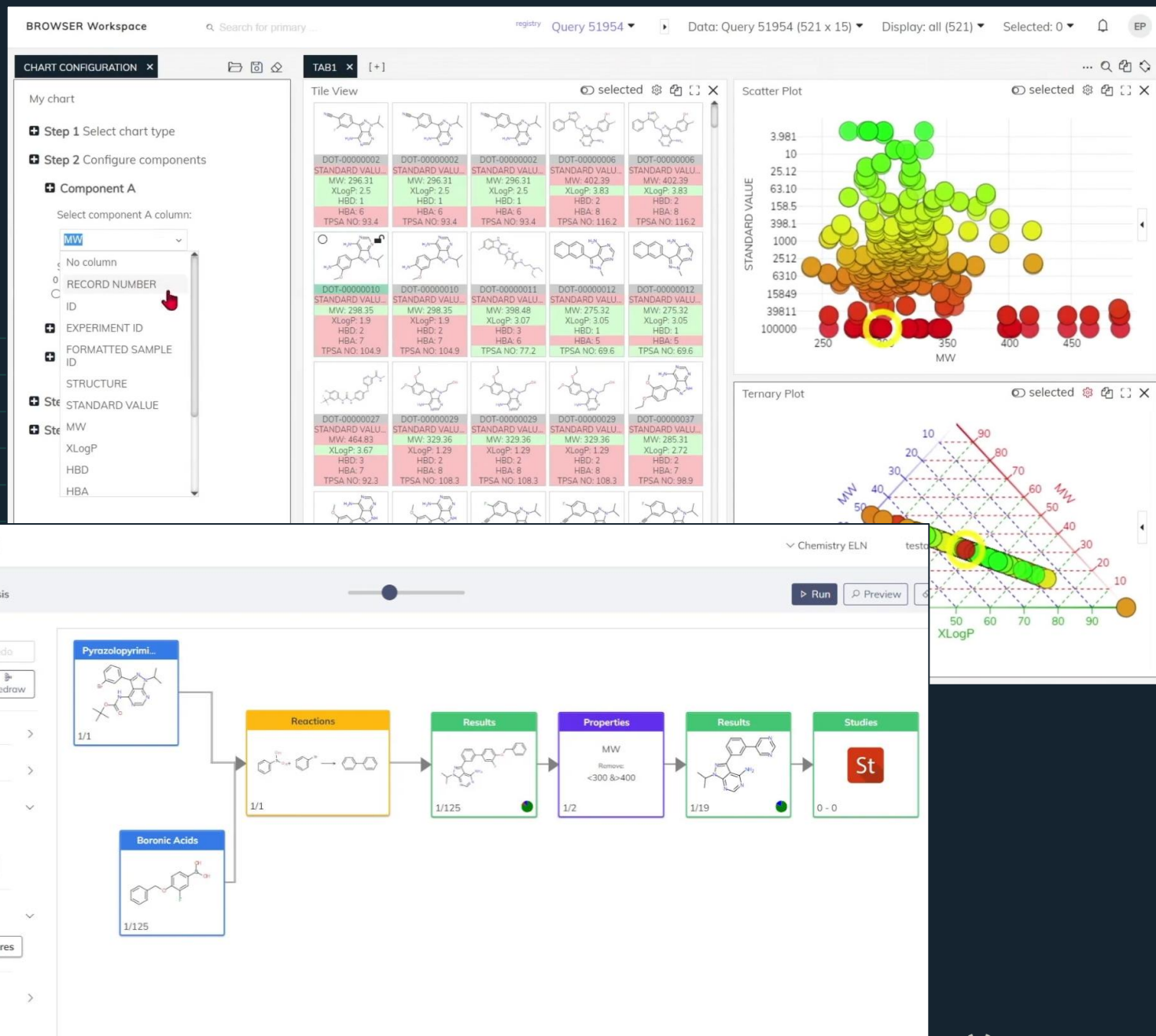
- Customizable dashboard content and layouts
- Powerful plotting and data visualization tools
- Display Virscidian LC-MS results alongside experimental design info and other data types



Chemistry Tools

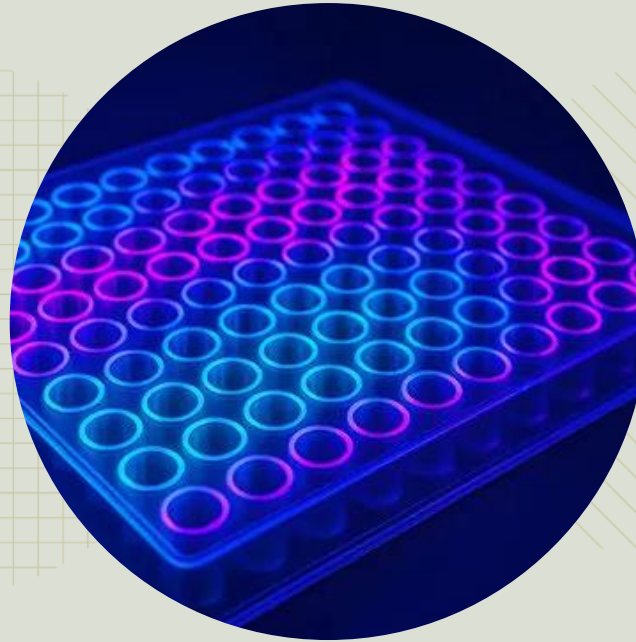
The tools you need to get chemistry done

- Reaction enumeration of singletons and libraries
- Analysis requests and CRO management
- Compound registration
- Integration with the Dotmatics suite of applications

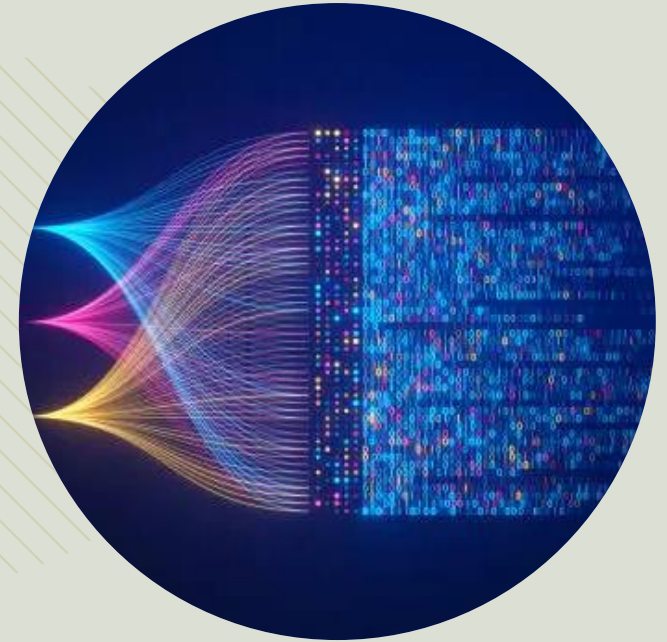




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Luma Platform**



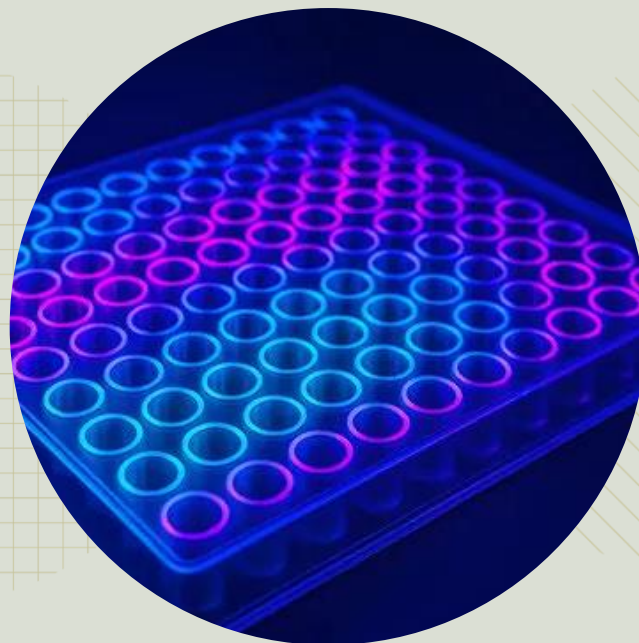
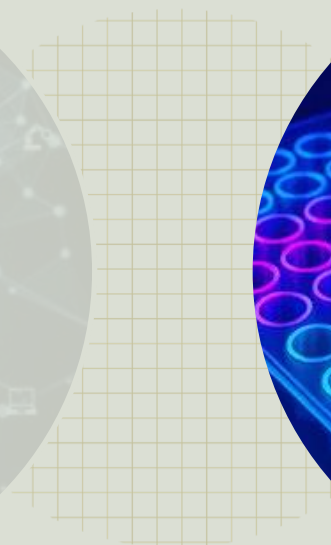
**Experiment
Builder**



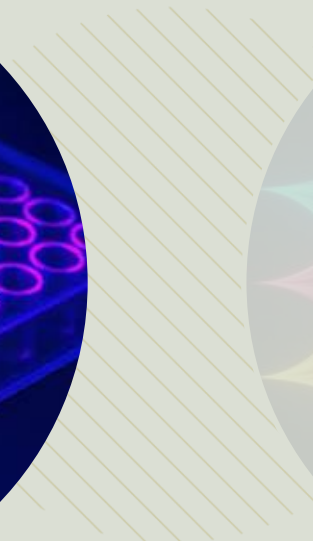
**Workflow
Automation**



Dotmatics
Luma Platform



Experiment
Builder



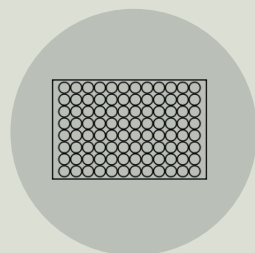
Workflow
Automation

Experiment Builder

Software tool for design and execution of synthetic chemistry experiments



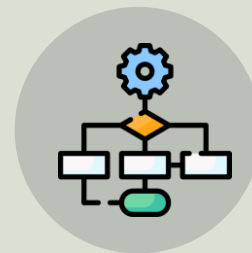
Connect to compound
databases



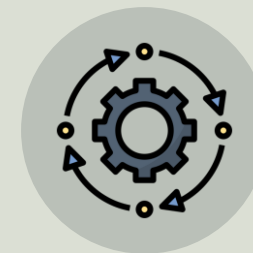
Handle any well plate



Built for automation



Multiple synthetic
workflows



Part of the Virscidian
platform



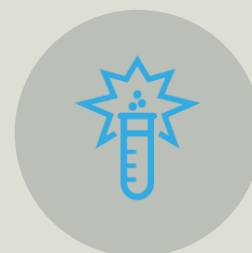
Integrates with ELNs



Stock solutions calculations



User authentication

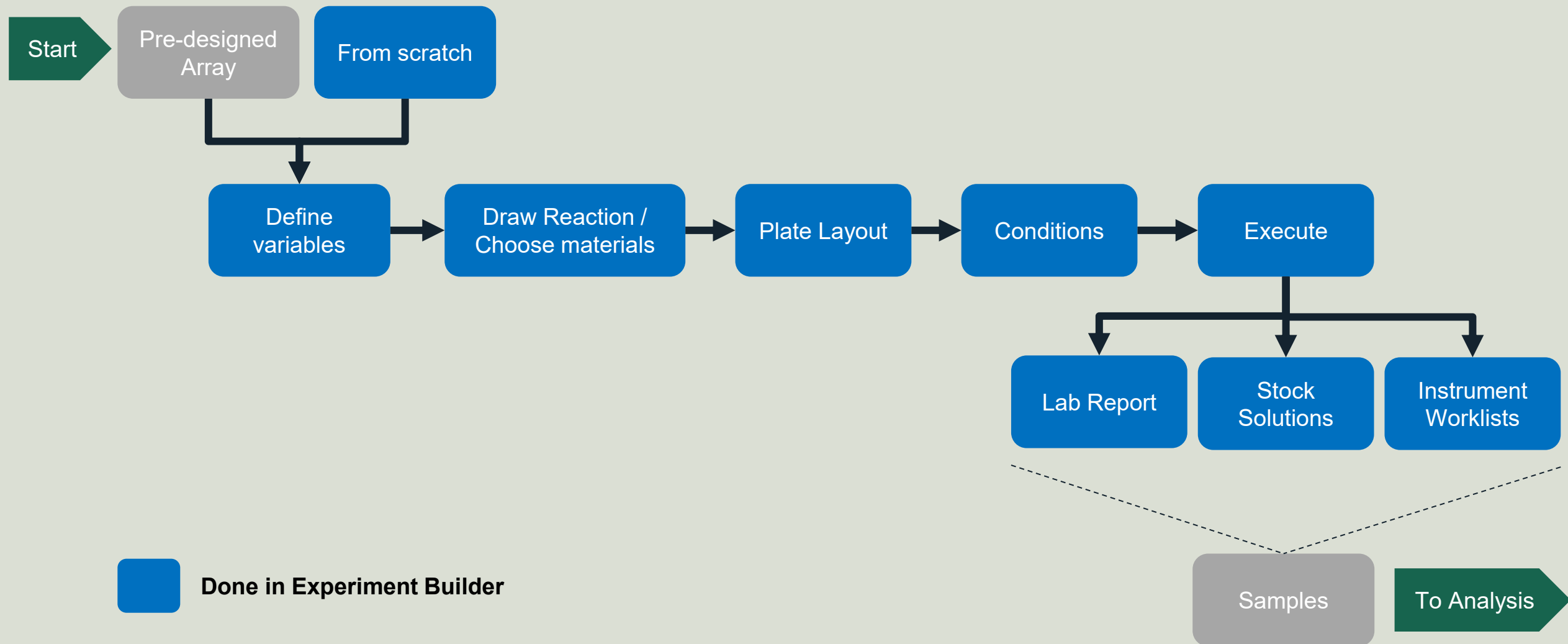


Reaction conditions

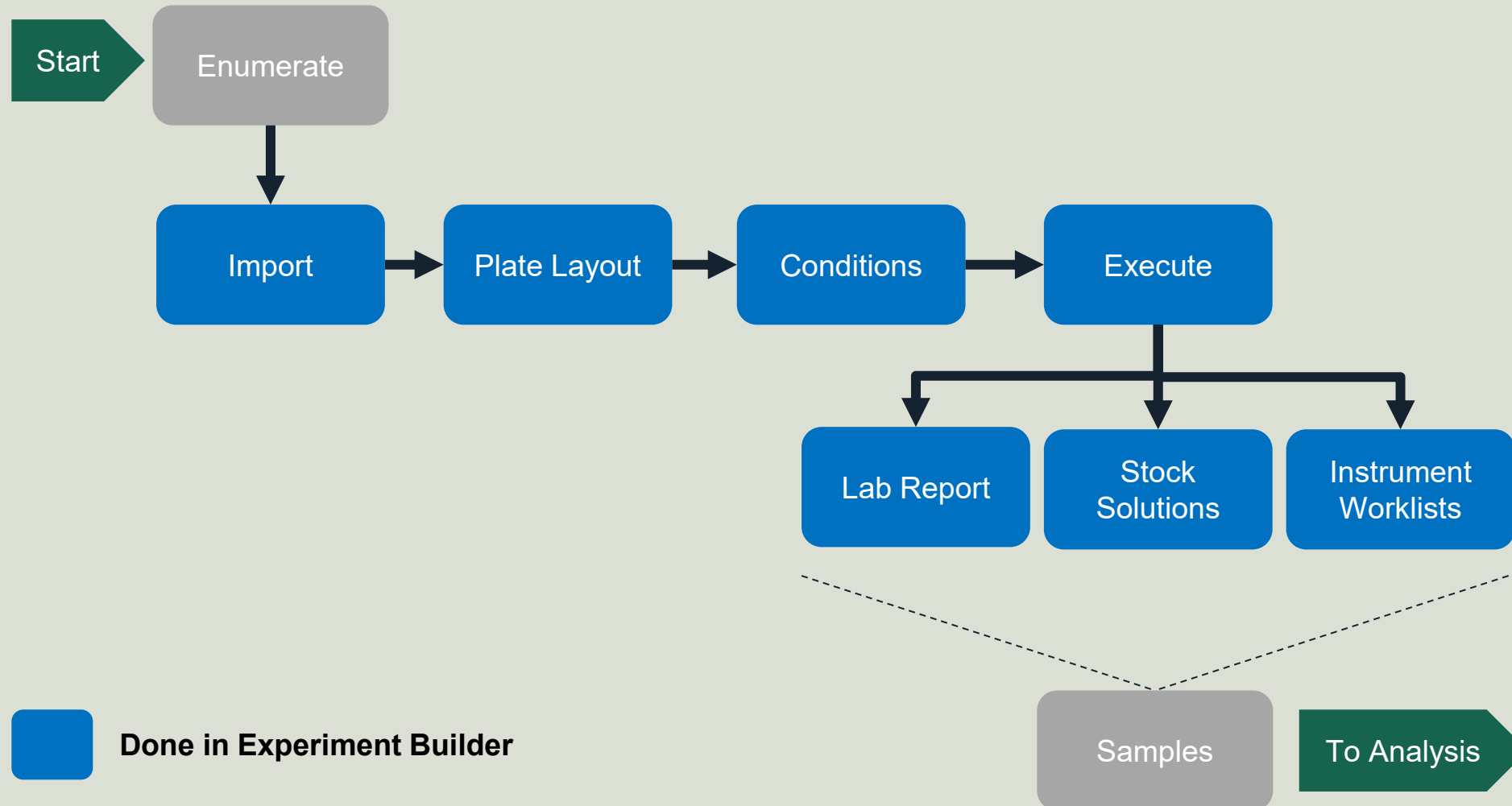


Web-based and secure

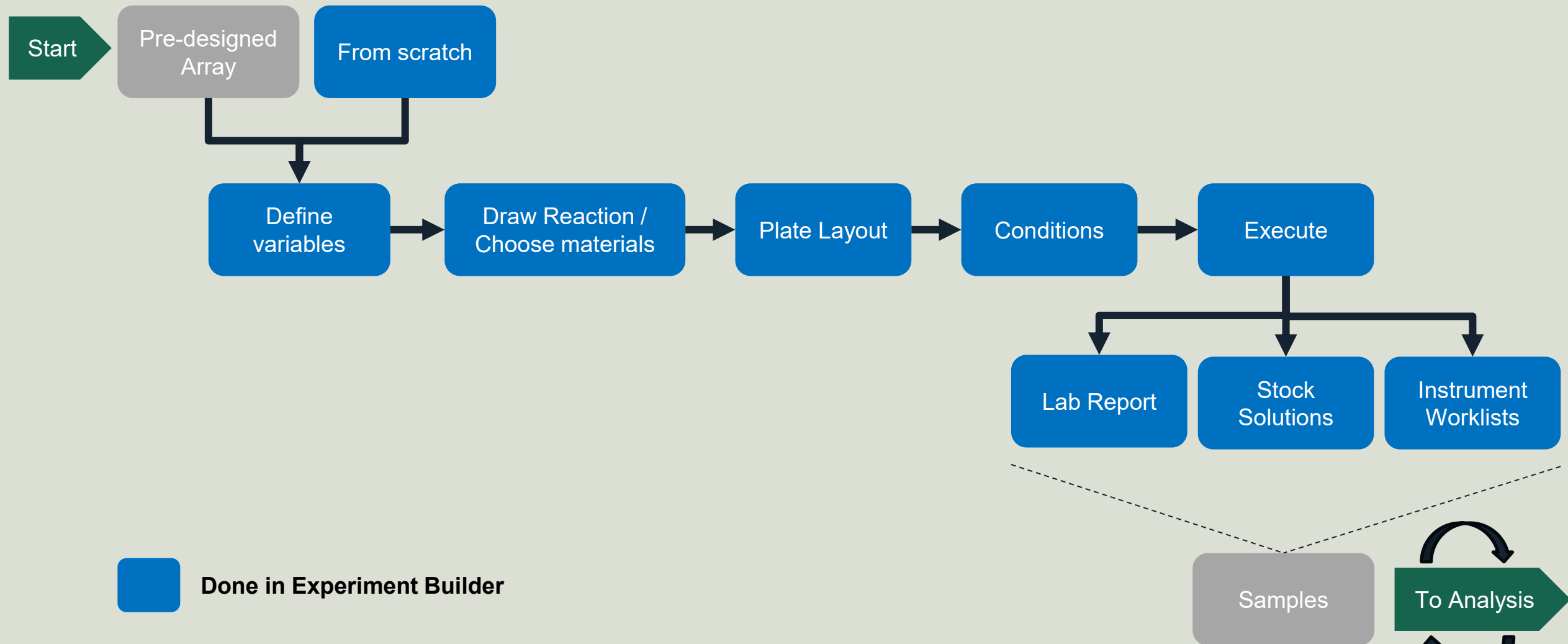
HTE Screening Design



Library / Parallel Synthesis Design

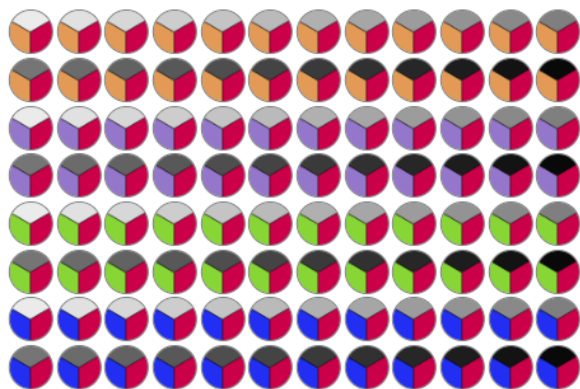


Reaction Monitoring Design



Streamline Design → Results

Experiment Builder



- Design variables
- Rxn materials and conditions
- Plate layout
- Time points
- Enumerated products
- Chemical structures

All information is
passed to Analytical
Studio, so analysis is
easy and automatic

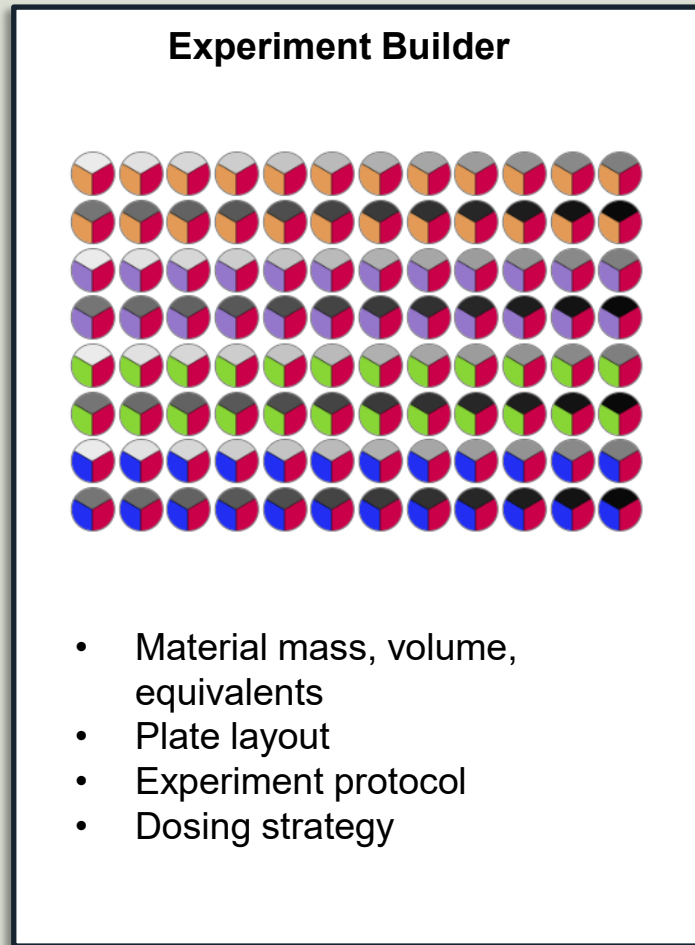


Analytical Studio

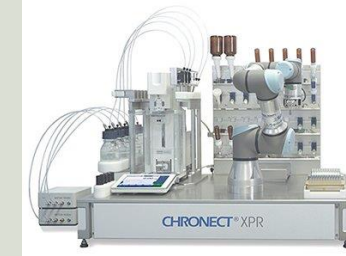


- Auto assign substances
- Yield and conversion %
- Impurities
- Best reaction conditions

Streamline Design → Execution



Solid Dosing



Liquid Handling

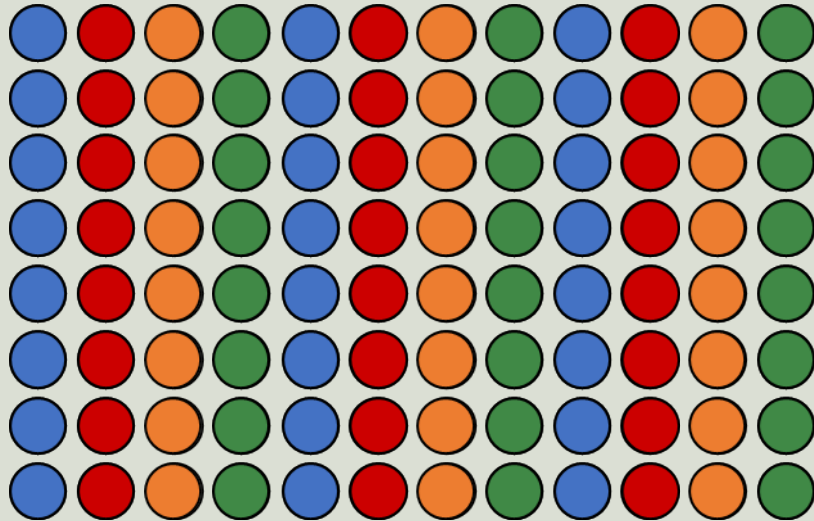


LC-MS Worklists

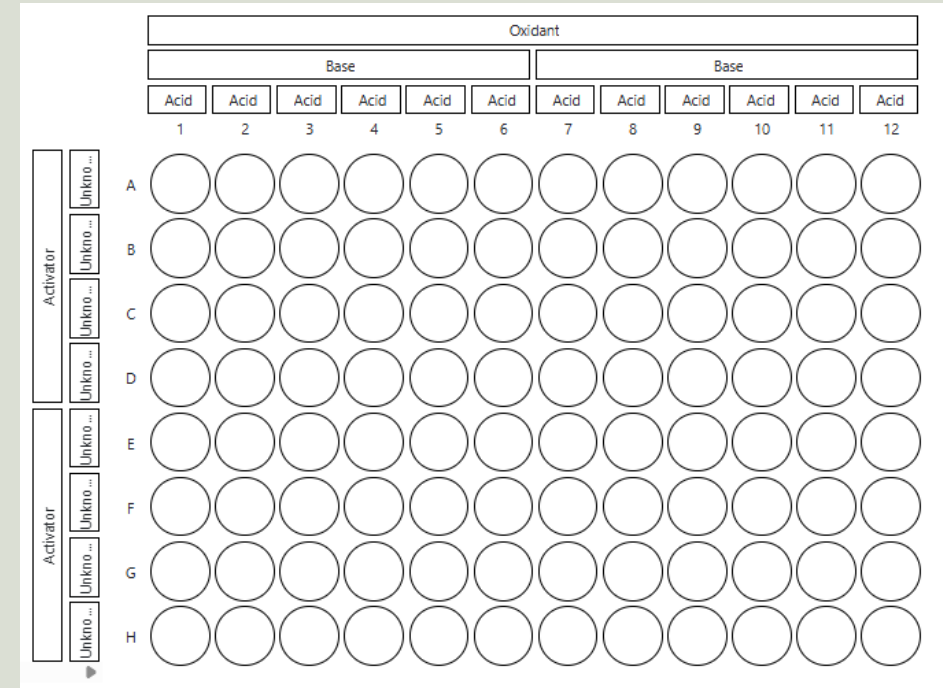


Layout options

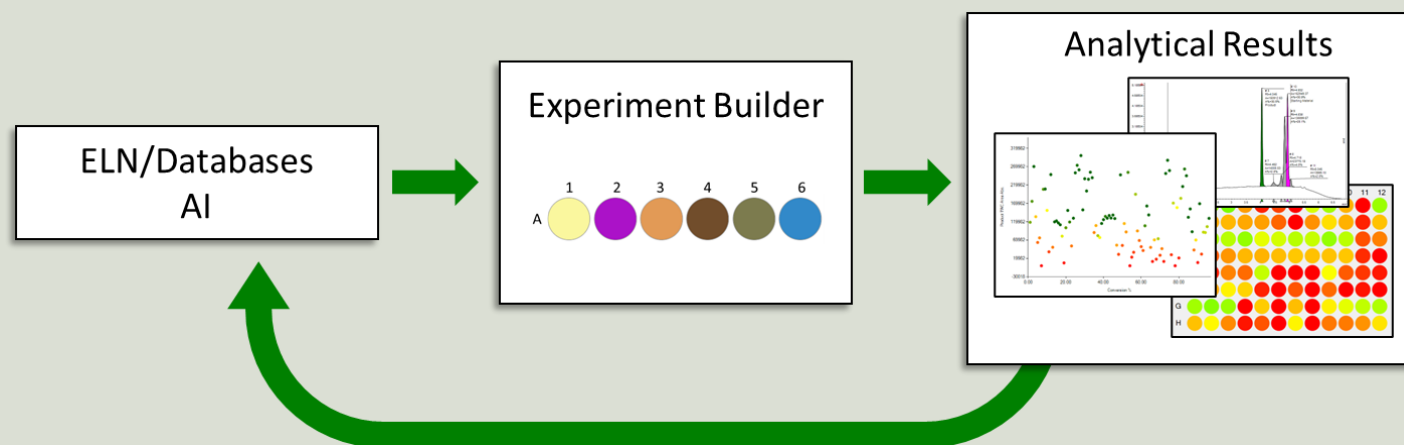
Fully Manual



Fully Automatic



Automated HTE



Suitable for:

- Autonomous reaction optimization labs
- Manually assisted Bayesian optimization experiments
- Integration with your existing tools
- Digitization of analytical results for consumption by AI/ML databases
- Automated decision making and actionable outputs

The Gold Standard...

Virscidian's Analytical Studio software is the industry **gold standard** for HTE

No one can match our...

- Data processing quality
- Sample throughput and speed
- Automated decision making
- Digitization of results



Reagent / Product Details

- Chemical substances and structures are automatically transferred from Experiment Builder and populated for data analysis
- Many customers define a wide range of substances for each reaction (often 10 – 15 substances)
- Substance list may be applied across an entire plate, or each well can have a different list

Customizable substance color

Substance names

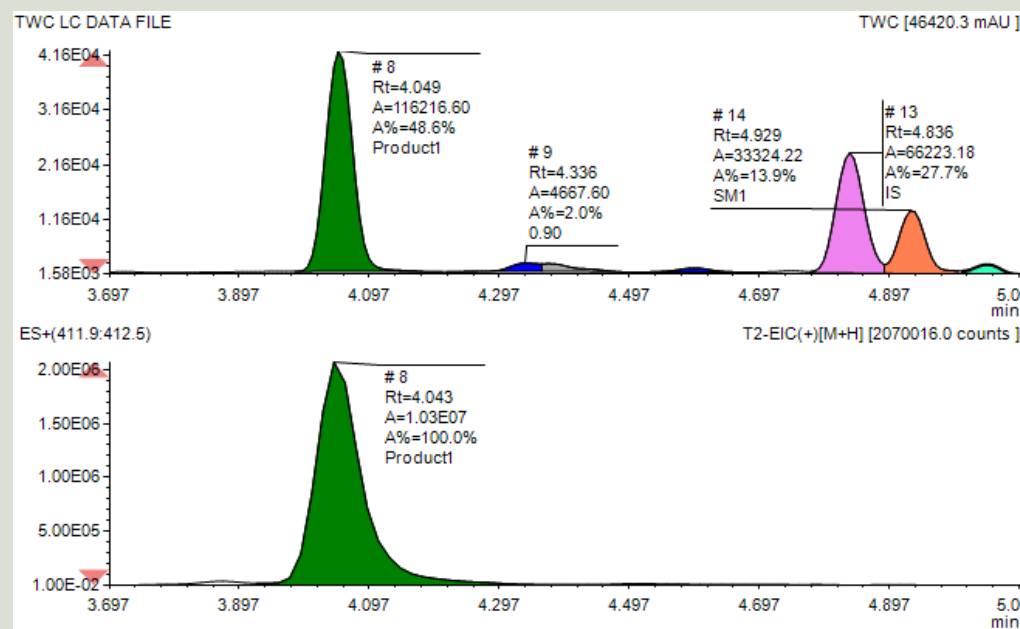
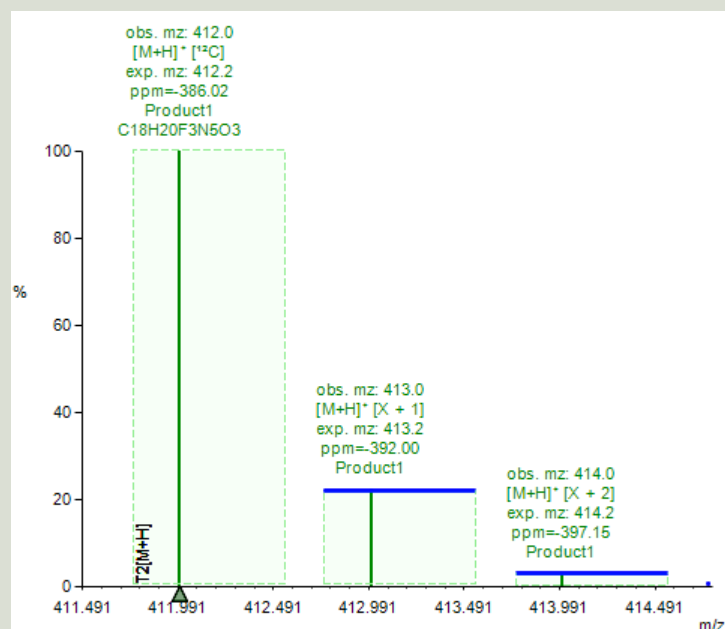
General				Target	
Name	Color	Class	Substance Type	Target	Formula
Impurity		▼ Analyte	IMP	1	C12H10F3N3
Product		▼ Analyte	Product	2	C18H20F3N5O3
Starting Material		▼ Analyte	SM	3	C12H9BrF3N3

Search for substance by
formula, mass, or
retention time

Define role the substance is playing
in the reaction

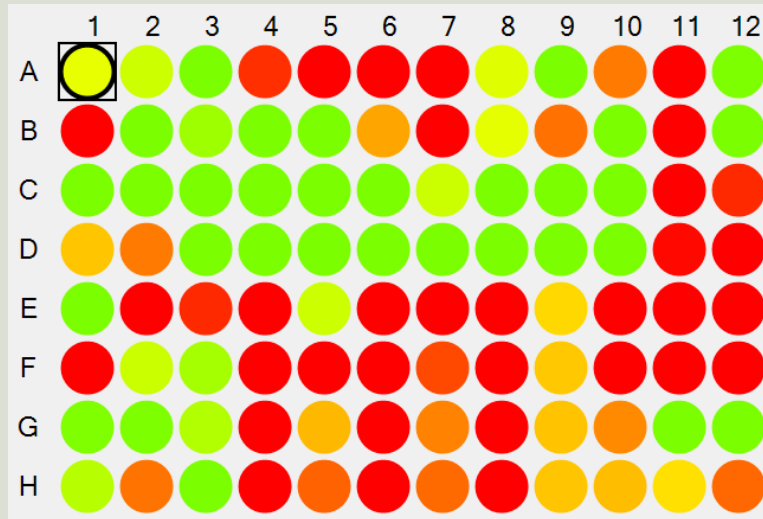
Peak Assignment and Isotopic Pattern Matching

- Substances automatically assigned to peaks using isotopic pattern match
- Fully annotated spectra and chromatograms
- Flexible adduct searching
- See UV and MS together



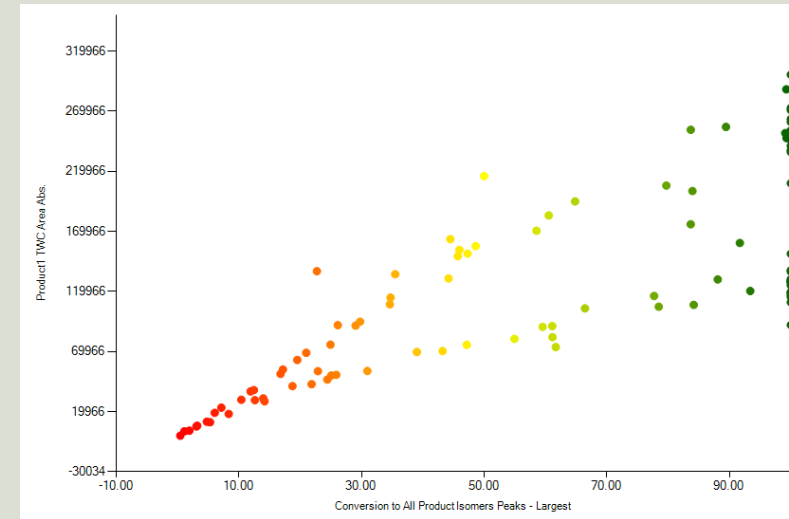
Batch Visualizations

Plate view heat map



- Coloration based on substance found, calculated result, or result decision

Graphical display



- Interactive graph types (scatter, bar, line)

Customized calculations and messaging

Expression Results			
	Rank	Expression Name	Result
	1	Quadrant Number	2.00000
	2	Column Number	12
	3	Row Number	C
	4	Location	C12
	5	Method	
	6	Substance Product Name 1	Product1
	8	Substance Limiting Reagent Name1	
	9	Substance Starting Material Name1	SM1
	10	Substance Starting Material Name2	
	14	Substance Side Product Name1	Byproduct1
	15	Substance Side Product Name2	
	24	Detector D1	UV210
	25	Conversion	34.63757
	28	Product Ratio to Internal Standard	0.21298
	30	Side Product Ratio to Internal Stan...	0.00000
	35	Limiting Reagent Ratio to Internal...	0.00000
	40	TWC Total Area	2.47896
	42	Number of Peaks TWC	7.00000
	43	D1 Percentage Assigned To Subst...	86.03152

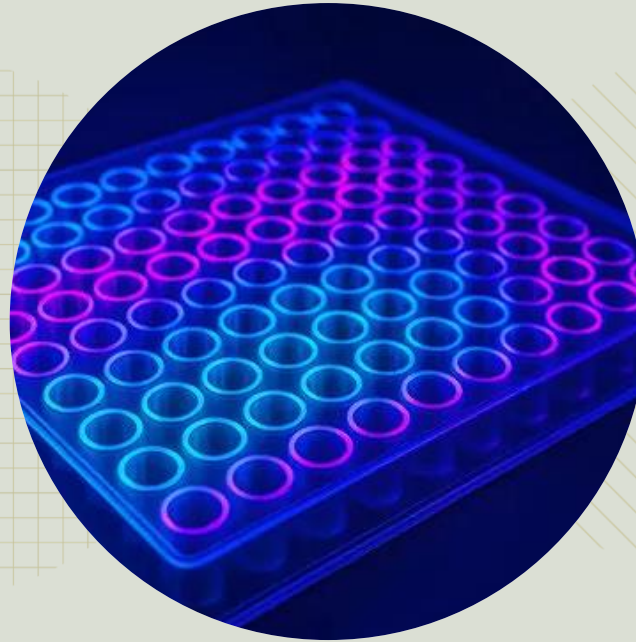
Virscidian scientists work with you to define what you want to see in this panel.

Often includes:

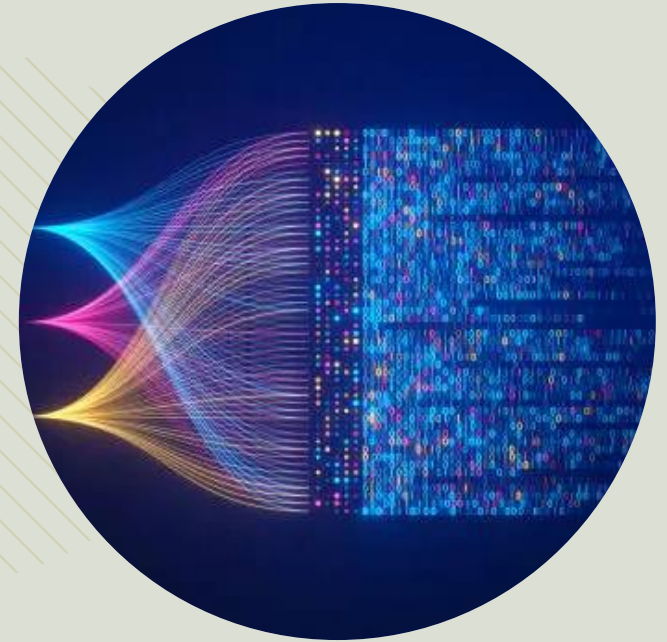
1. Sample metadata and reaction conditions
2. Substance results and peak attributes
3. Customized calculations
4. Review states triggered (examples: early elution or weak signal)
5. Reaction scoring which includes peak attributes, impurities, coelution, etc.
6. Automated commenting



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Luma Platform**



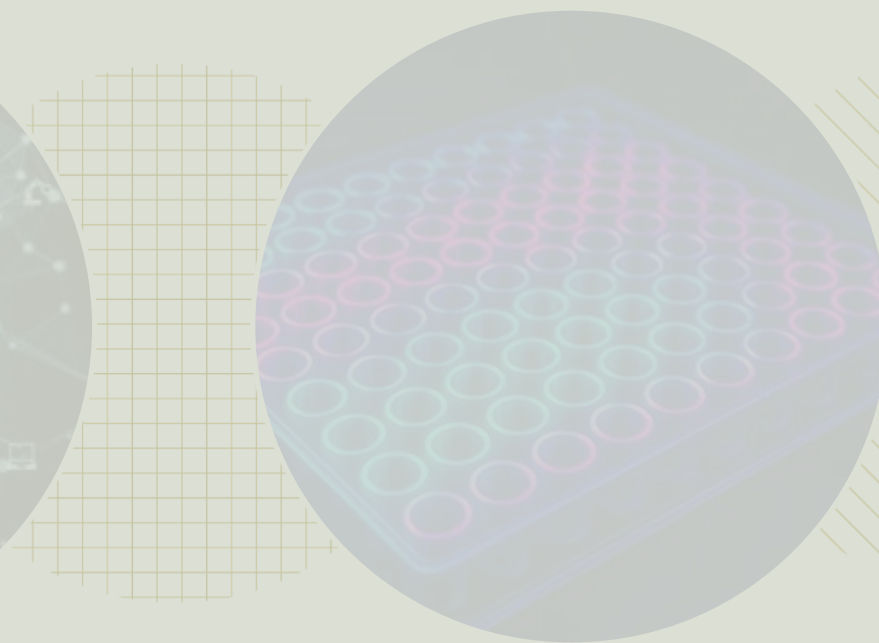
**Experiment
Builder**



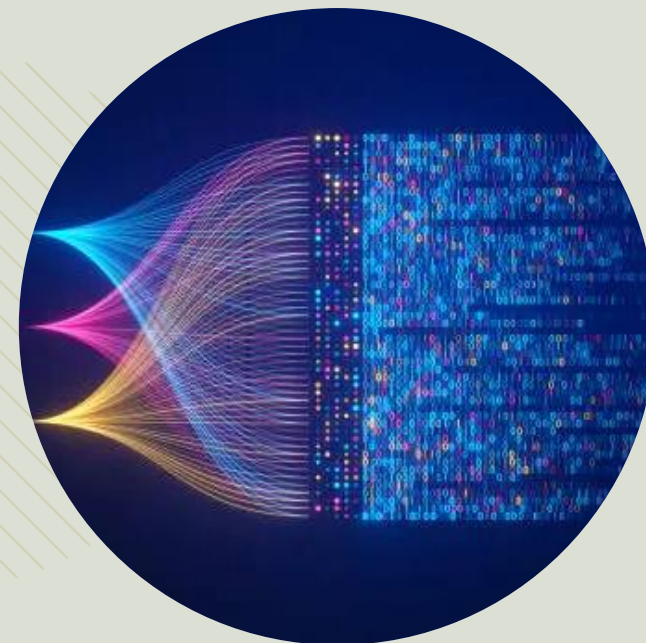
**Workflow
Automation**



**Dotmatics
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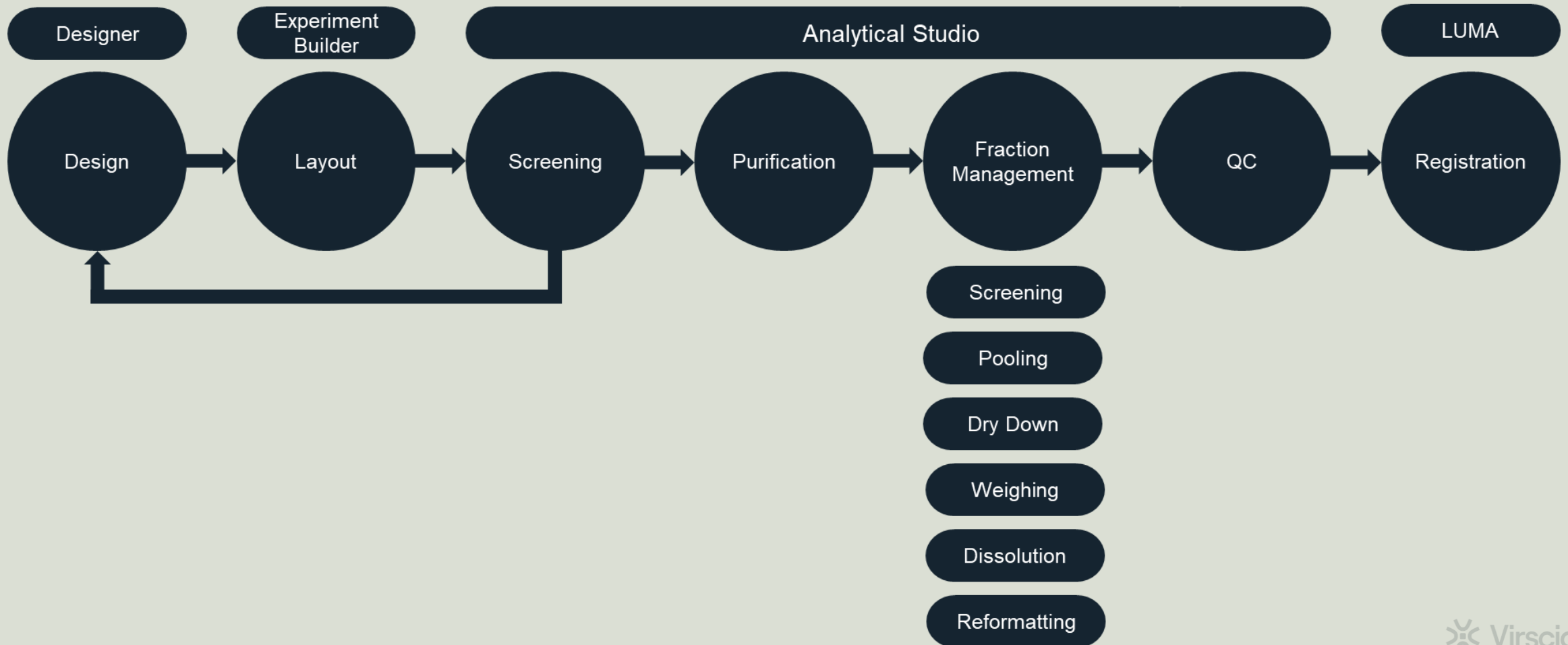
**Experiment
Builder**



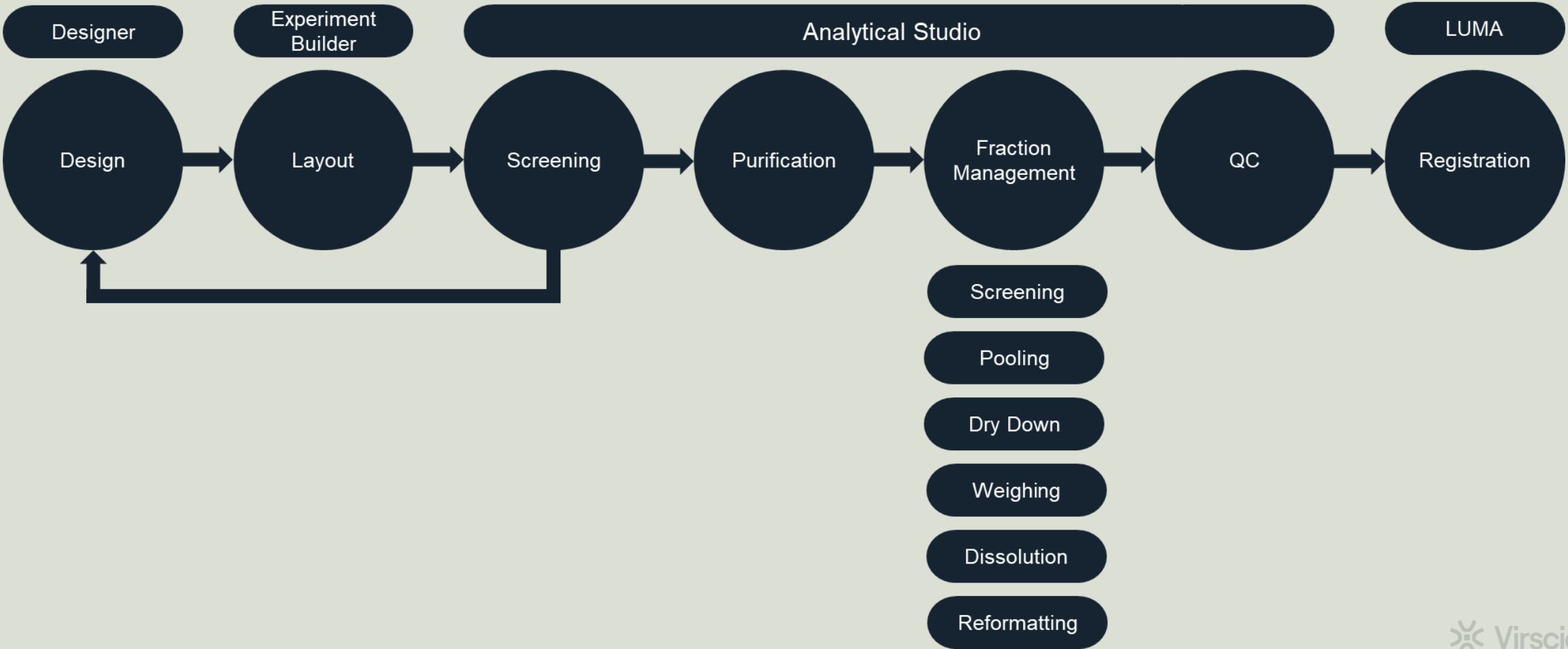
**Workflow
Automation**

Complete Workflows are Possible!

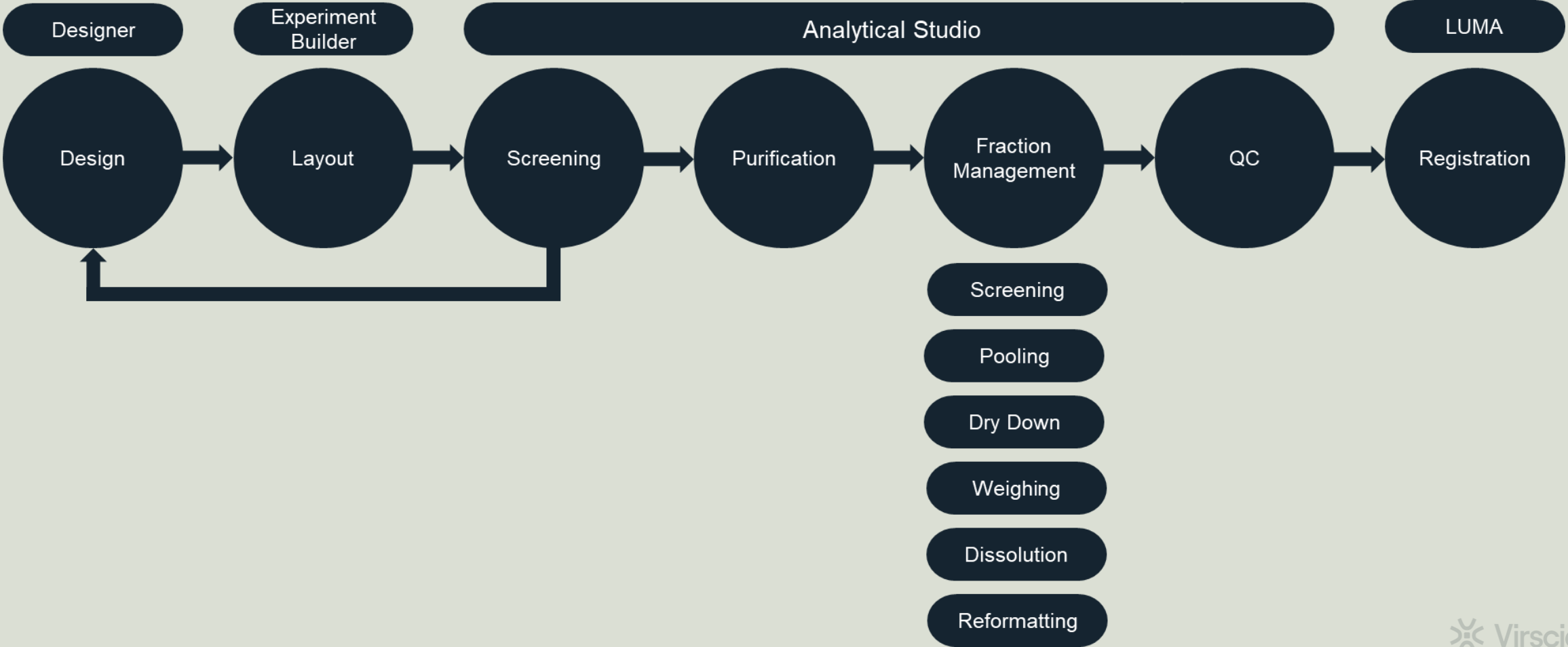
Requires sophisticated informatics and a modern software platform...

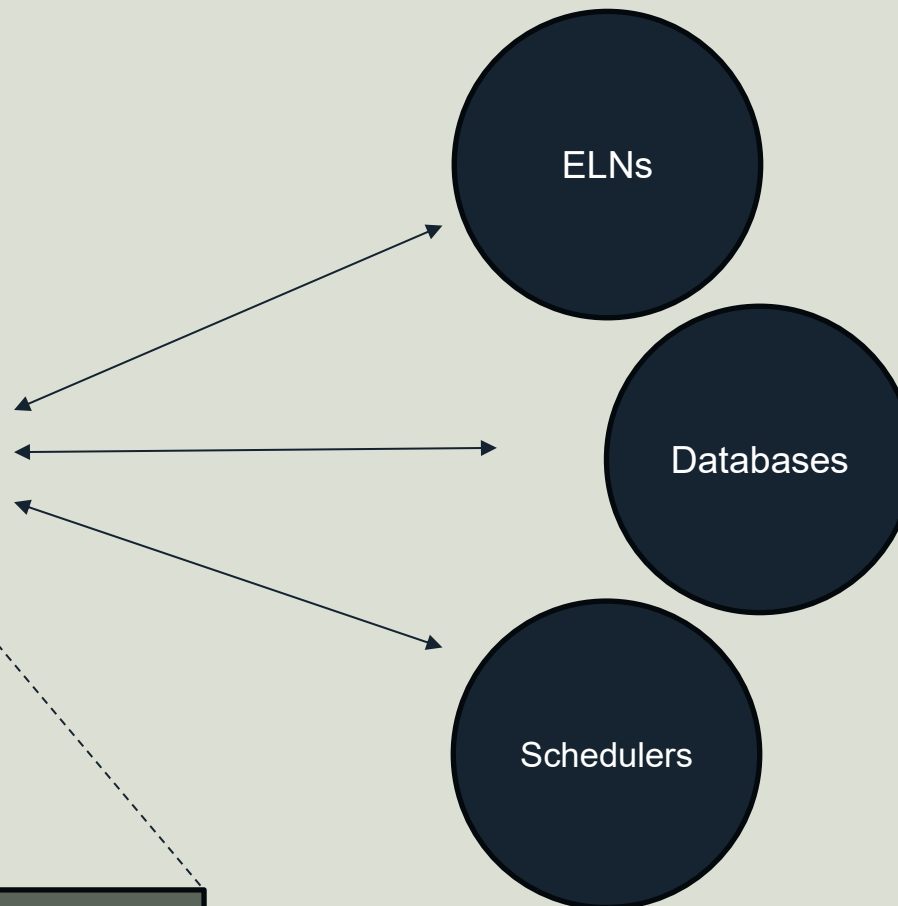


Metadata ----->
Tracking ----->
Logging ----->
Reporting ----->



Sample lists prepared for you
(auto-generated if needed)





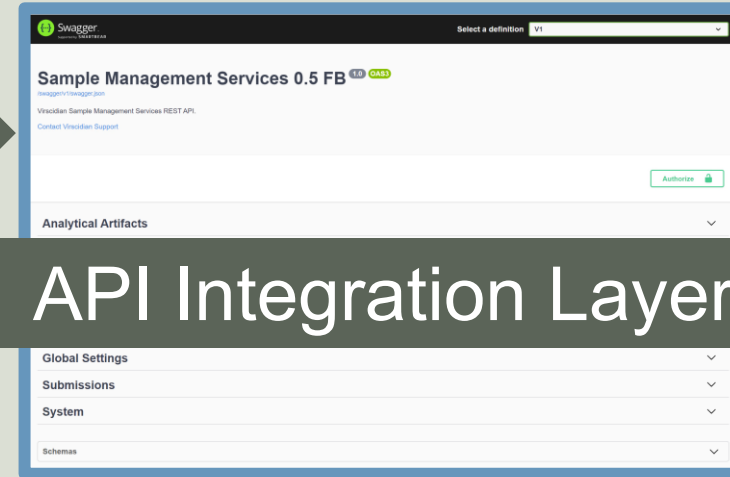
JSON format
Any sample result (peak data, calculated values,
images, etc)
Allotrope report format
Notifications
Sample status
Sample Lists

Virscidian APIs

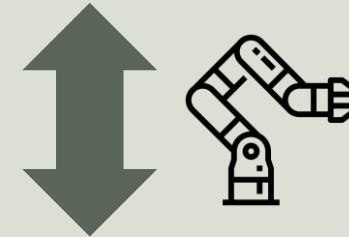
```
{
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    "Schema": "Virscidian Experiment Schema V2.json",
    "Override": true,
    "SubmissionInfo": {
      "ParentSubmissionId": null,
      "CustomerNaturalId": "P-123456789",
      "OrgUnitName": "HTP-LAB1",
      "Project": "MicroScale HTP",
      "WorkflowName": null,
      "WorkflowStage": "Crude-QC",
      "Comments": null,
      "SubmittedBy": "John Doe",
      "CreatedBy": "ELN",
      "SubmissionAttributes": [
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        },
        {
          "Name": "Volume",
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          "DataType": "Float",
          "Units": "uL"
        },
        {
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          "DataType": "Float",
          "Units": "mM"
        },
        {
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          "Value": null
        },
        {
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          "Value": null,
          "DataType": "Integer"
        }
      ]
    },
    "ExternalControls": [],
    "Containers": [
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        "SequenceId": "1",
        "Type": "Plate",
        "Samples": [
          {
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            "Location": "A,01",
            "CompoundType": "Sample",
            "SampleAttributes": [

```

Electronic
Submissions
in JSON
format

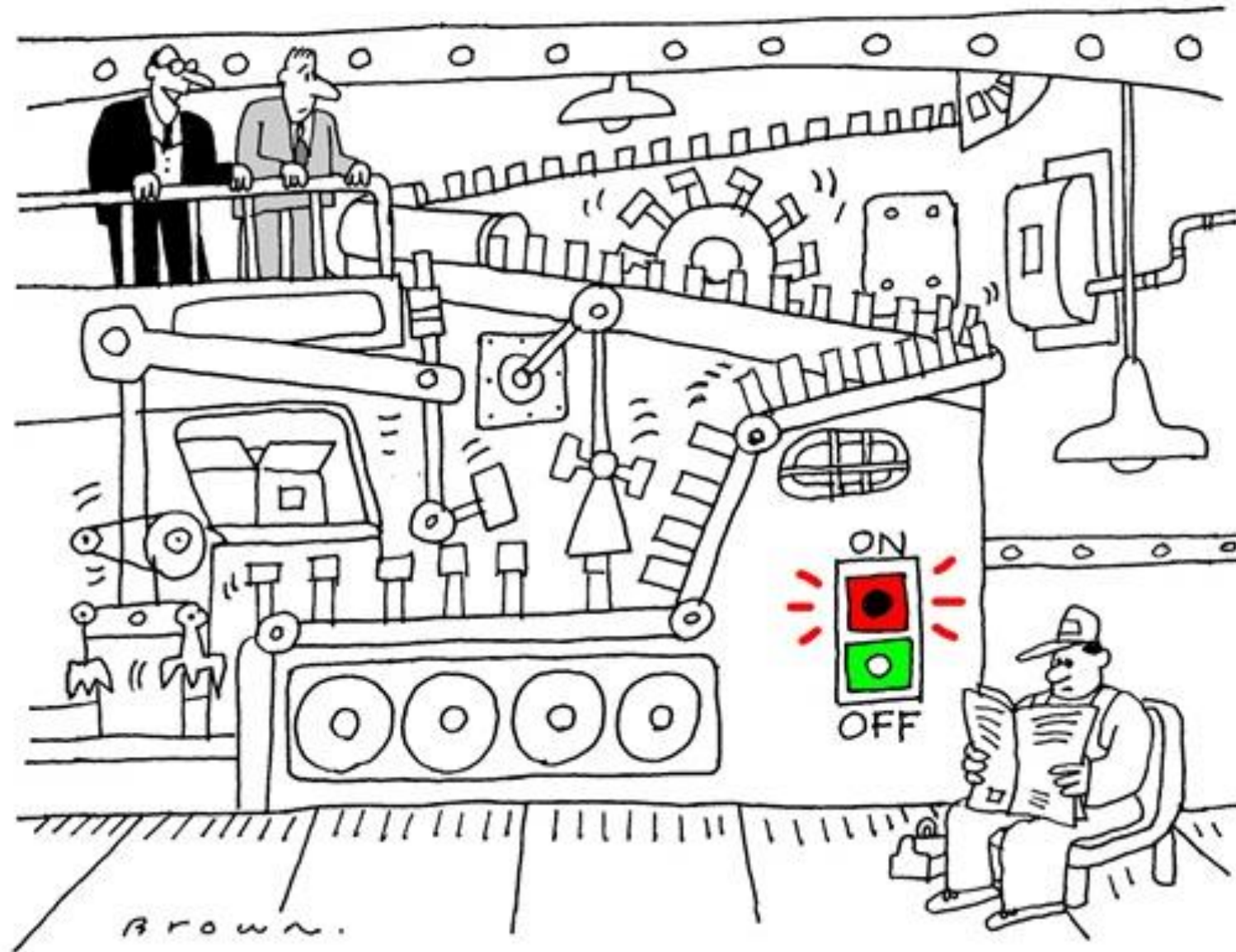


API Integration Layer



On-demand Samplelist Create Service API for Master Scheduling software:

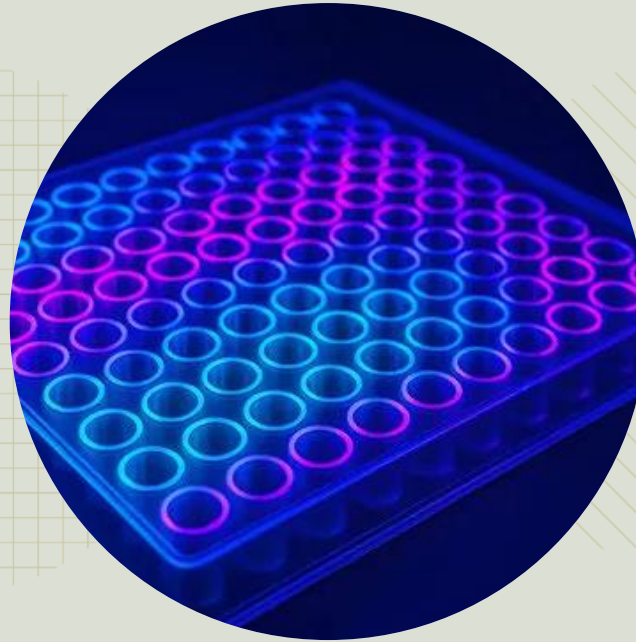
- Biosero GBG™
- HighResBio Cellario™
- Etc...



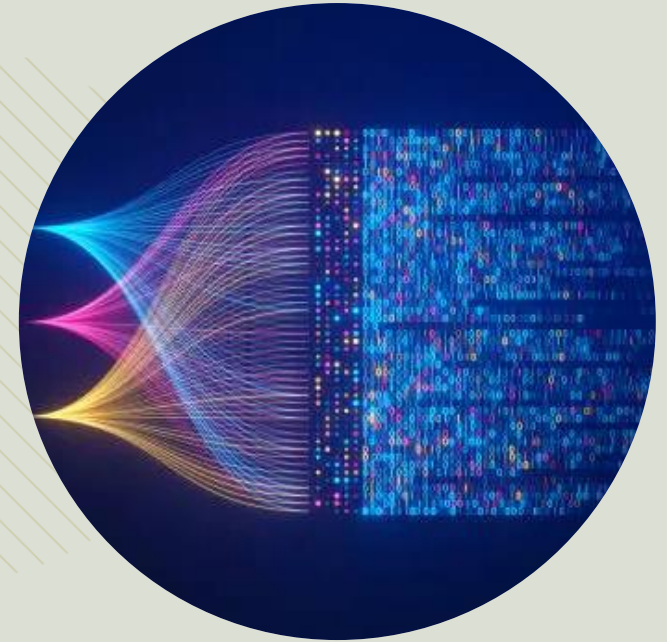
"We're almost fully automated now."



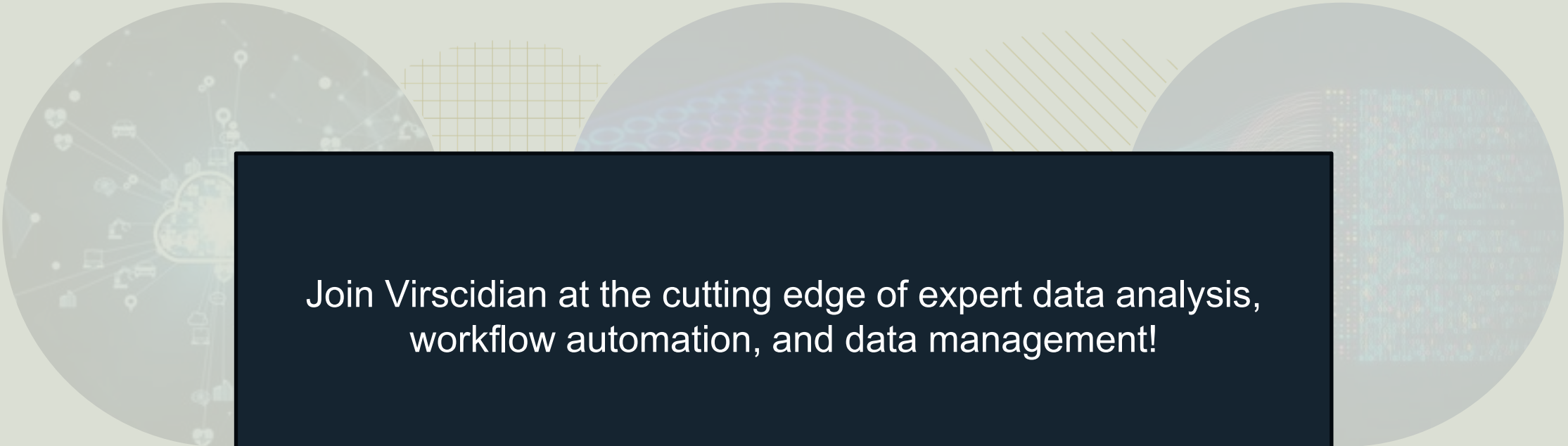
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**Workflow
Automation**



Join Virscidian at the cutting edge of expert data analysis,
workflow automation, and data management!

Dotmatics
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Experiment
Builder

Workflow
Automation



Transform Complex Data into Confident Decisions

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info@virscidian.com

