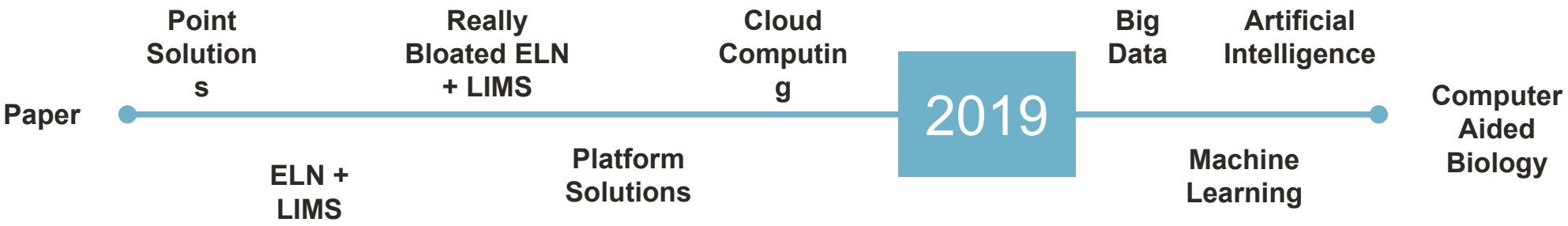
ANTHA: A LABORATORY OPERATING SYSTEM FOR THE DIGITAL LAB OF THE FUTURE

Strategies for modernizing laboratory environments

Tiffany Montgomery
Director, Life Sciences Solutions
t.montgomery@synthace.com

THE DIGITAL LAB: A HISTORY



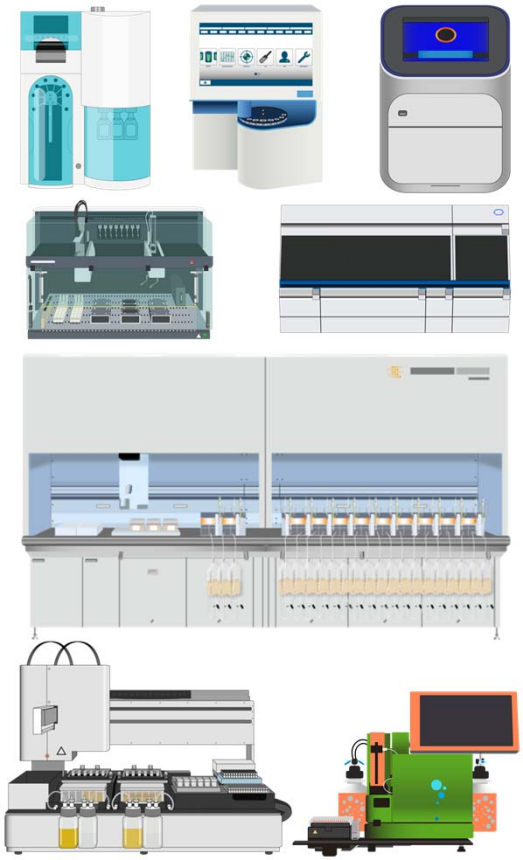
How do we overcome barriers to achieving true computer aided biology?

THIS IS OUR CONCERN, DUDE

The first thing we've learned is the importance of having outstanding data to actually base your ML on…
…people underestimate how little clean data there is out there, and how hard it is to clean and link the data.

Vas Narasimhan, CEO of Novartis AG

SOLVING THE PROBLEM AT THE SOURCE



Data management software

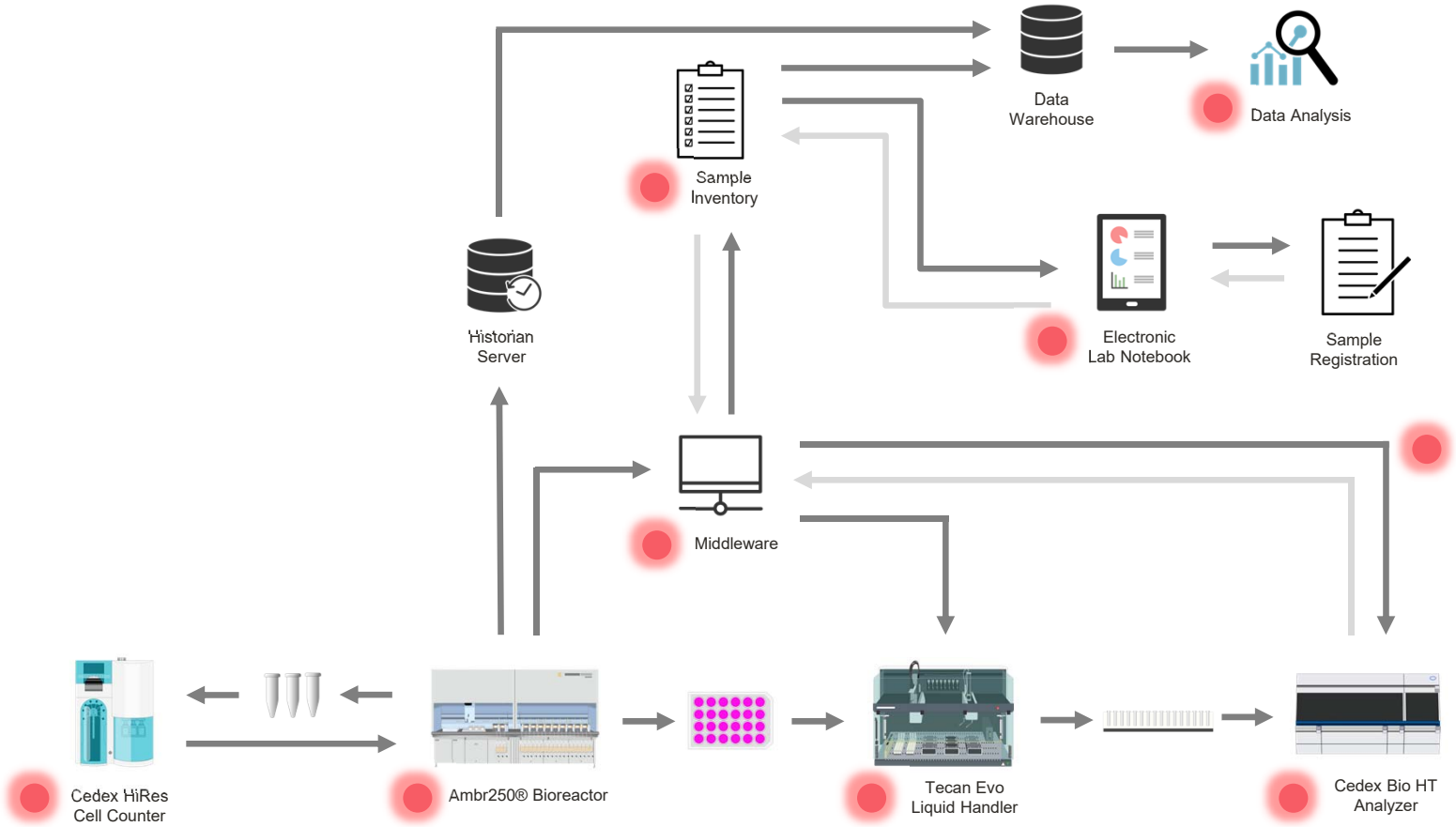
Hardware manufacturer software

Scripting

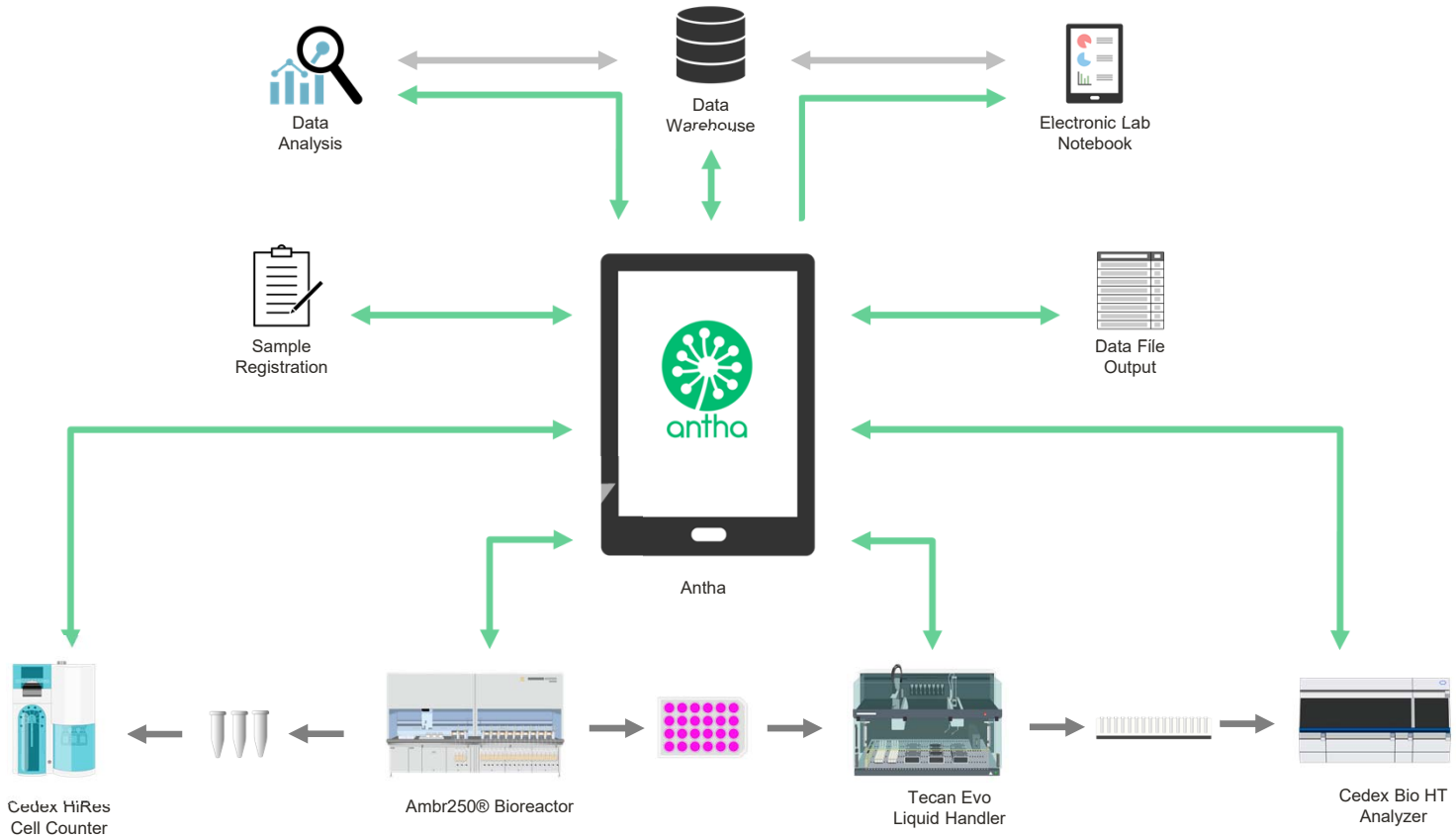
In-house developed software solutions

Email, paper and Excel

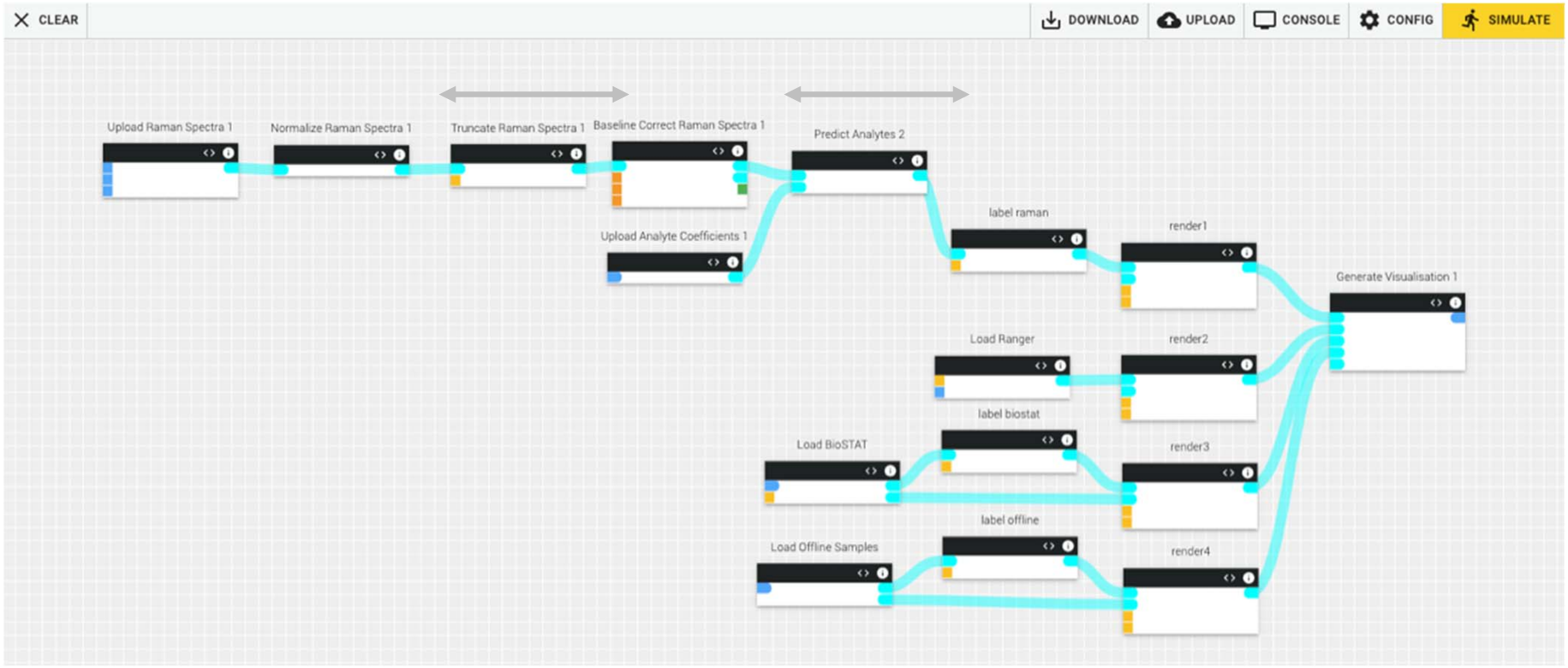
UPSTREAM PROCESS DEVELOPMENT



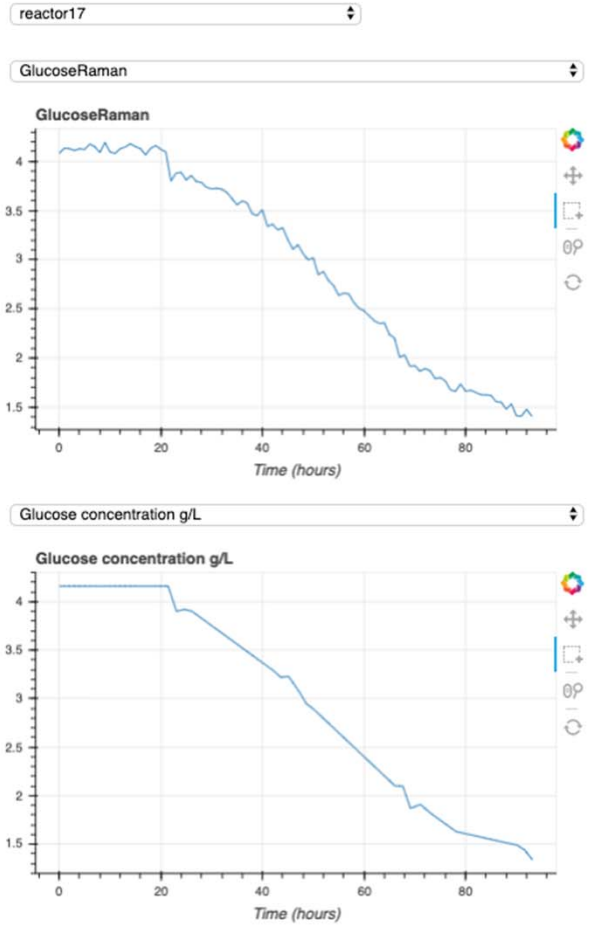
UPSTREAM PROCESSING SOLVED

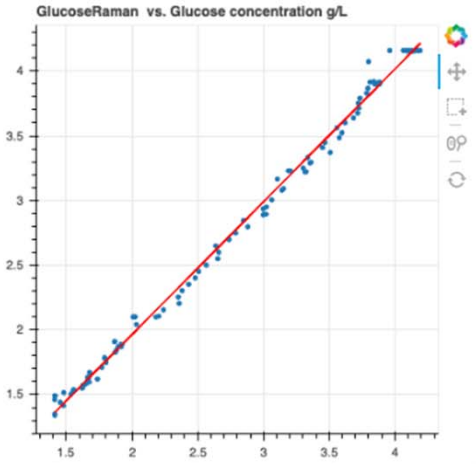


CASE STUDY: IN LINE RAMAN



CASE STUDY: IN LINE RAMAN





#	Statistic	Sensor 1	Sensor 2
0	count	114.00	114.00
1	mean	2.91	2.89
2	std	0.97	1.00
3	min	1.41	1.34
4	25%	1.88	1.87
5	50%	3.04	2.98
6	75%	3.83	3.90
7	max	4.19	4.16

#	Linear Regression Fit	Values
0	Regression Coefficient	1.0258
1	Intercept	-0.0877

But it’s not enough.

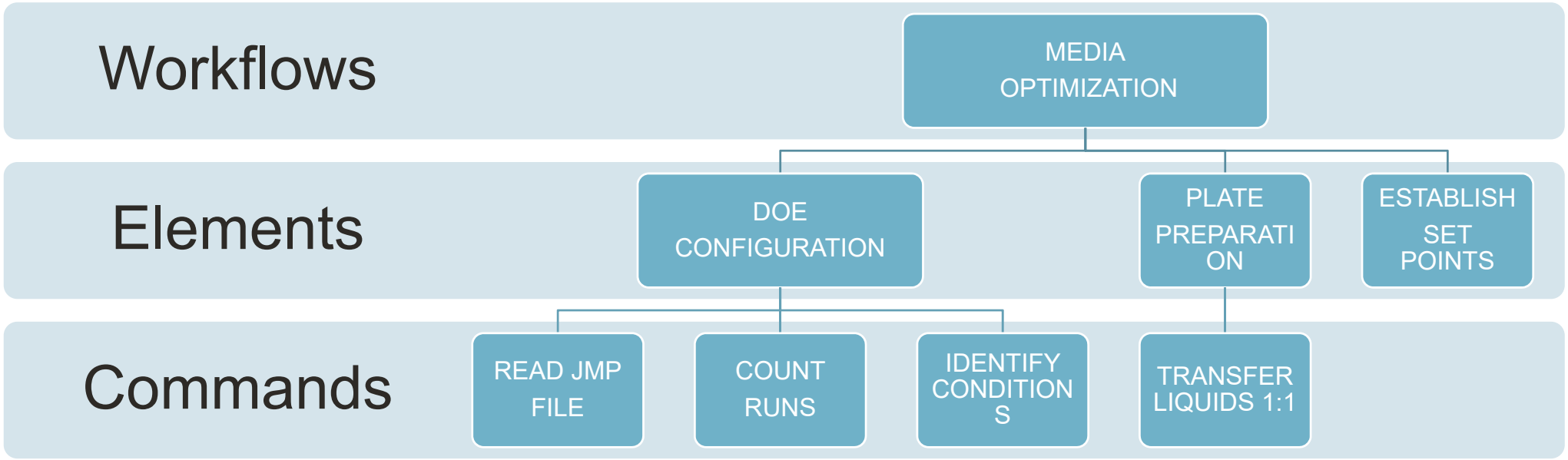
ANTHA: A LABORATORY OPERATING SYSTEM

OPEN

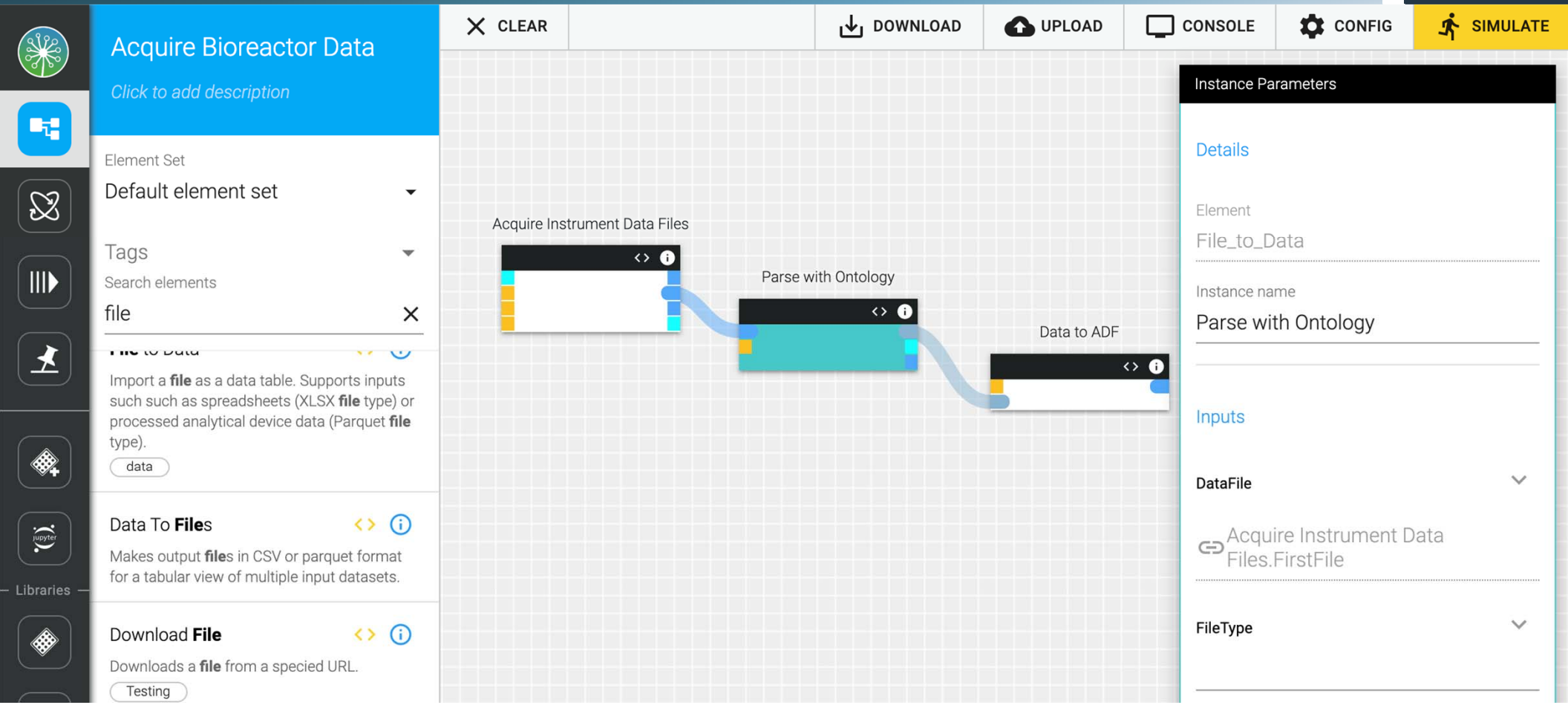
FLEXIBLE

EXTENSIBLE

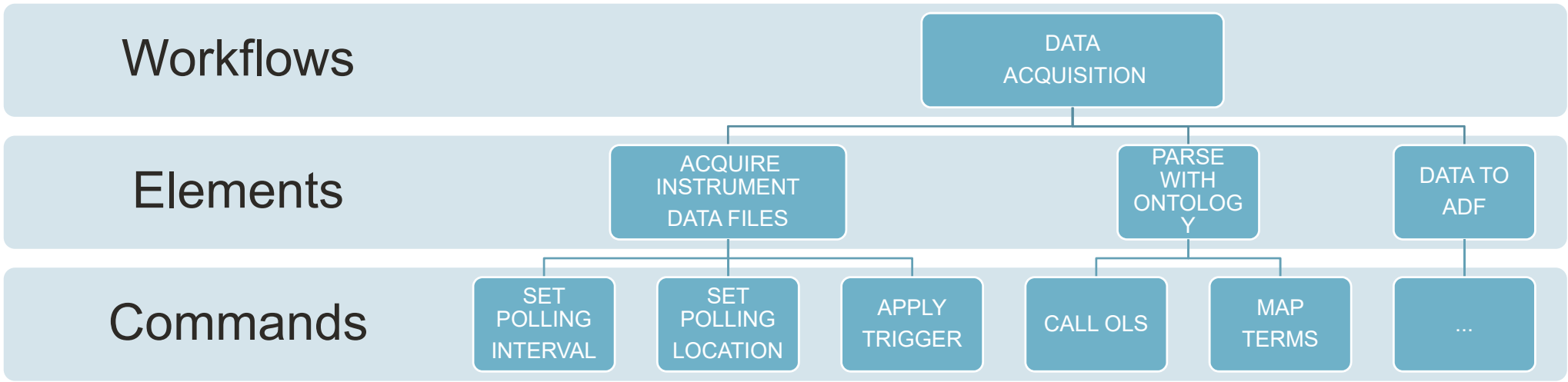
ALLOTROPE IN ANTHA



ALLOTROPE IN ANTHA



ALLOTROPE IN ANTHA



Synthace