3DEXPERIENCE®

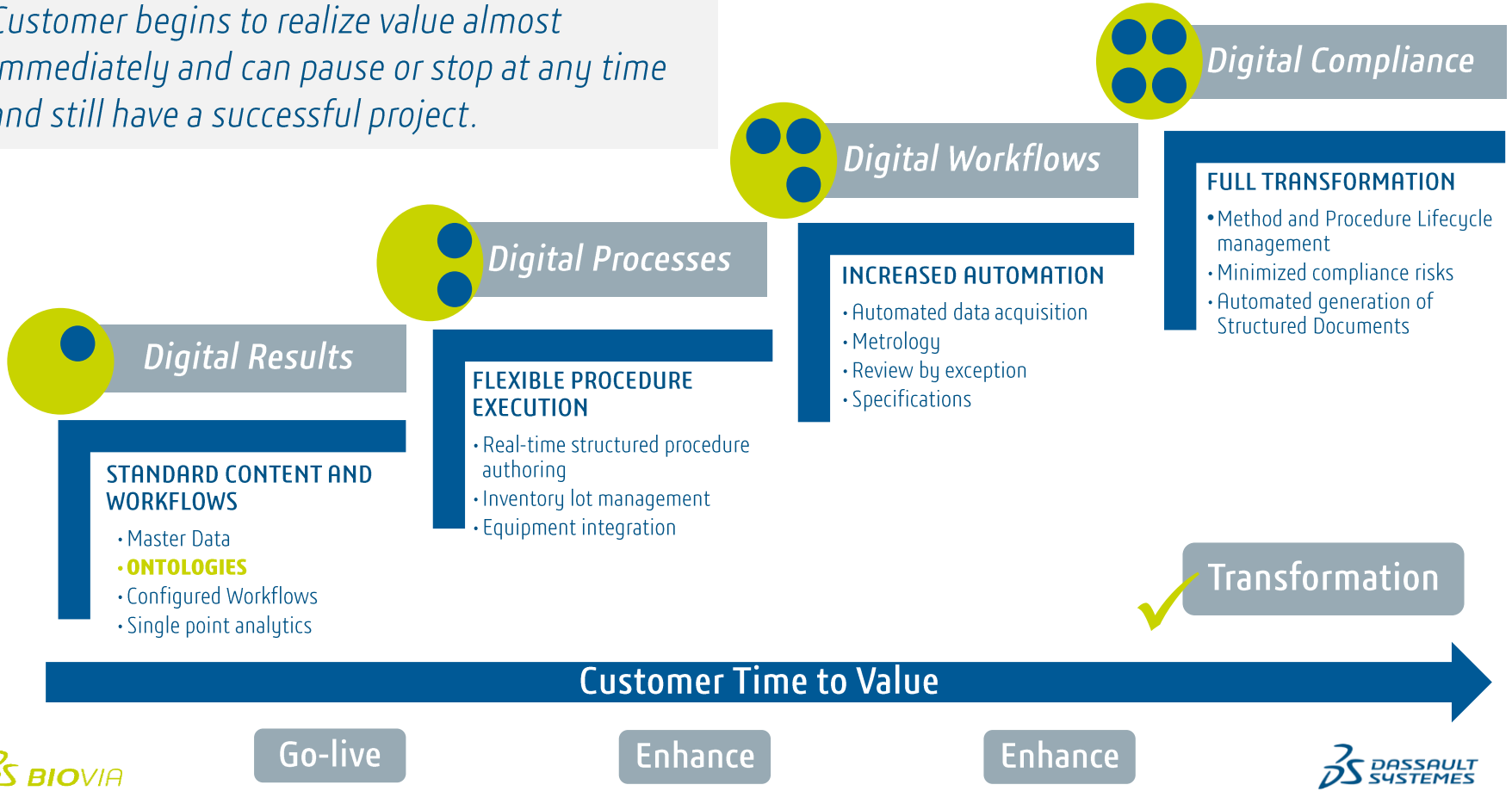
BIOVIA LABORATORY

April 2023

DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

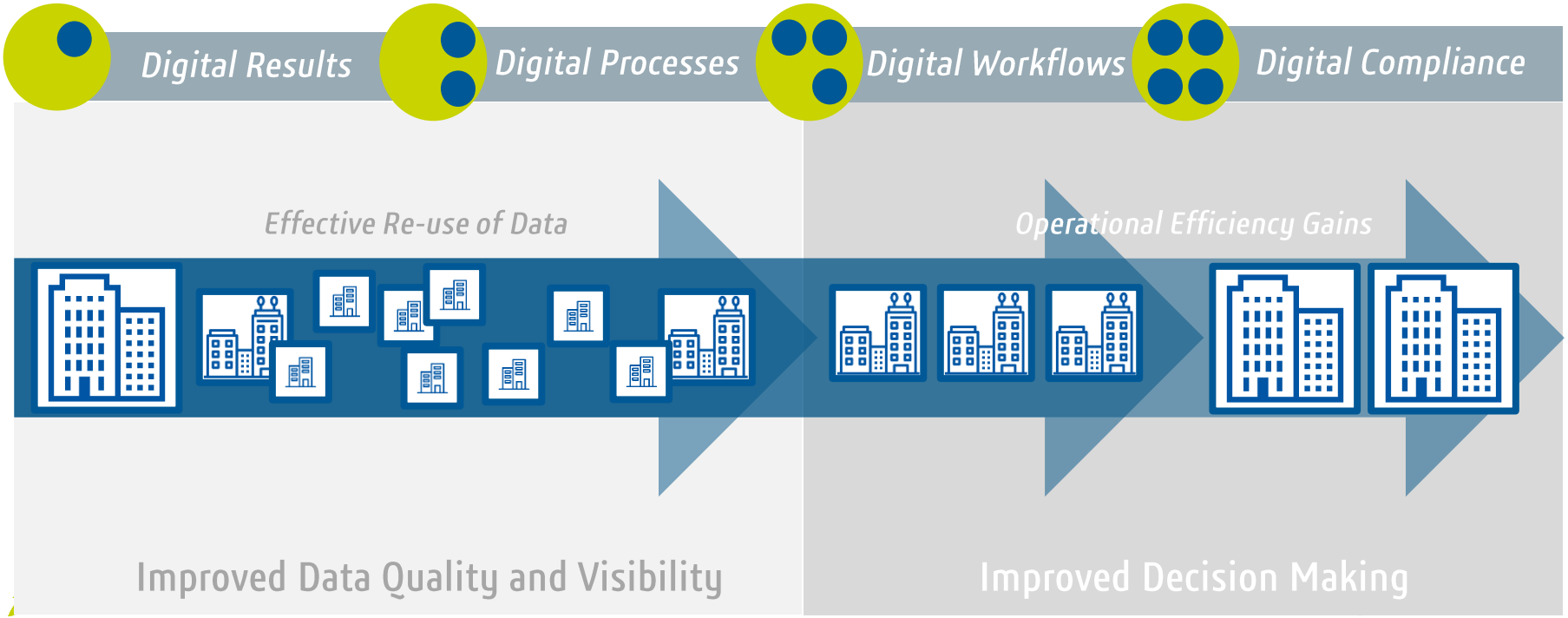
A NEW WAY TO IMPLEMENT

Customer begins to realize value almost immediately and can pause or stop at any time and still have a successful project.



MAJORITY OF VALUE BY MARKET

Where most customers would likely realize the larger value for investment with digitization



THE NEED FOR COMMON REFERENCE DATA

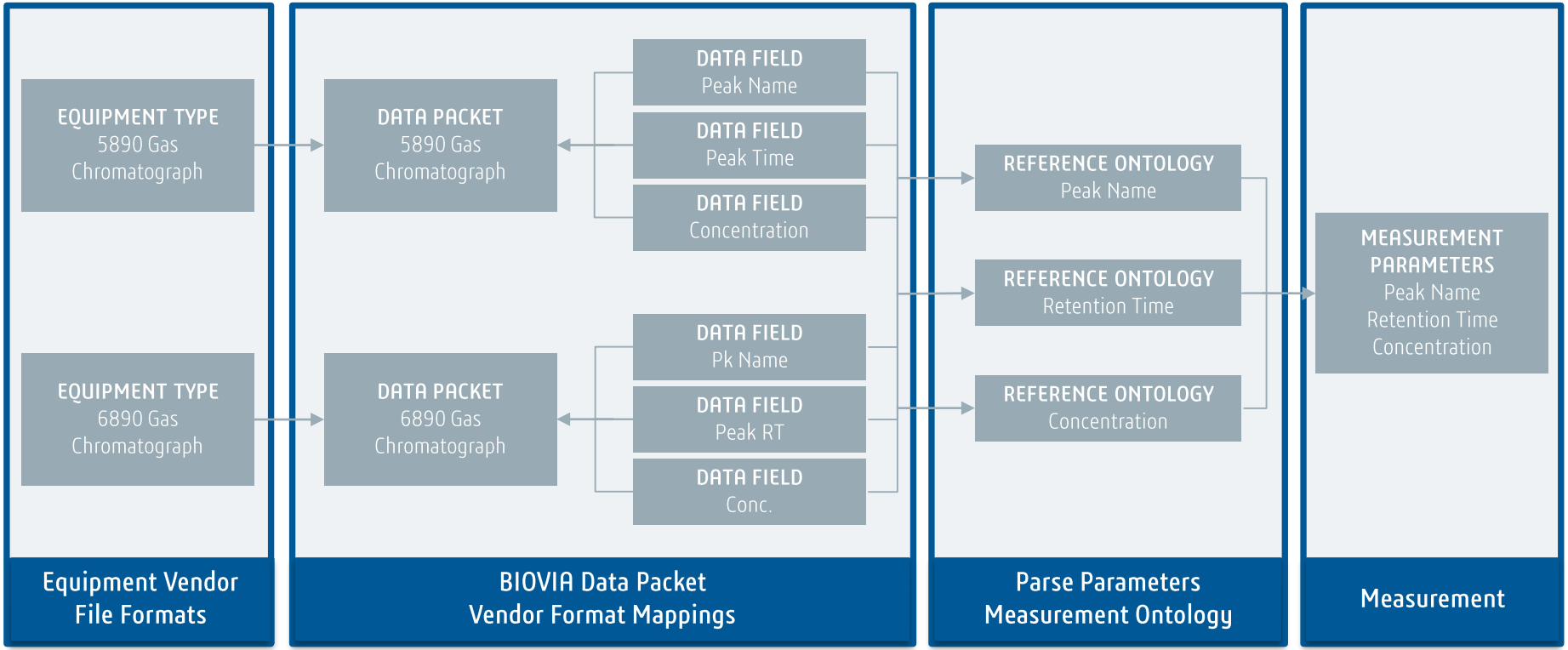
Instrument 1

Instrument 1
Sample ID
Dilution
Sample date
Viability
Total cells
Viable cells
Avg. diam.

Instrument 2
Date & Time
Sample ID
Total Density
Viable Density
Viability
Avg. Live Diameter
Total Live Count
Total Cell Count
Live Std Deviation
Cell Inspection Type
Batch ID
Cell Type
Flow Time
Dilution Ratio
Tray Location
Mixing Routine
Sample Time
Operator

Instrument 2

ORIGINAL EQUIPMENT REFERENCE DATA MODEL



RE-THINKING EQUIPMENT ONTOLOGY

Provide an ontological approach to instrument data based on instrument class

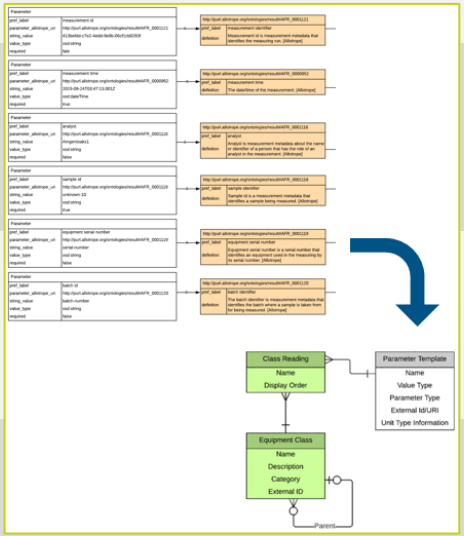
- Improve consistency and re-use of reading definitions
- More closely align with industry initiatives such as Allotrope Foundation Ontologies (AFO)
- Align internal ontologies

Simplify the construction and maintenance of reference and master data

- Improve the quality and robustness of implementations

Stronger relationship between equipment measurements and process parameters

Enable delivery of packaged equipment reference data



THE NEW WAY FORWARD: CLASS READING MODEL

EQUIPMENT CLASS → CLASS READING → PARAMETER TEMPLATE

EQUIPMENT CLASS

Base equipment categories with specific lab purposes to produce a set of measurements

Examples: balance, pH meter, BGA, SEC, bioreactor, extruder

Medium set, strongly governed

READING ONTOLOGY

New contextual use of a Parameter Template applied to an Equipment Class

Examples: initial temperature, final temperature, inlet temperature, reactor temperature

Large set, dynamically expandable, governed with Equipment Class

NEW

MEASUREMENT ONTOLOGY

CORE MEASURABLE ATTRIBUTES

- *Examples: temperature, mass, density, pH, peak area, stir speed*

Small set, very strongly governed

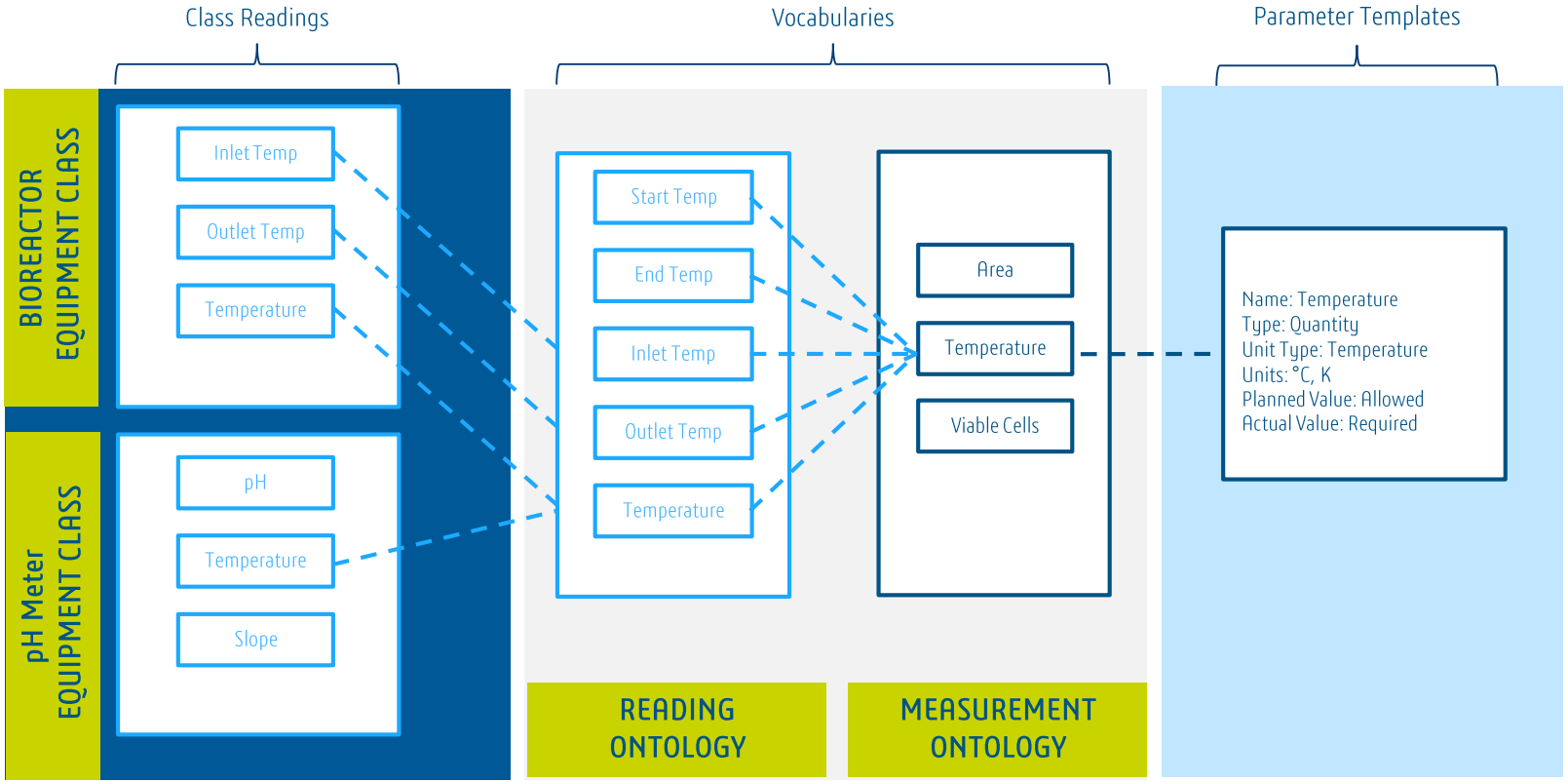
PARAMETER TEMPLATE

Common group of measurements for convenience/correlation

- *Examples: temperature, amount, mass density, pH*

Large set, very strongly governed

CLASS READING EXAMPLE: TEMPERATURE



CLASS READING MODEL SUMMARY

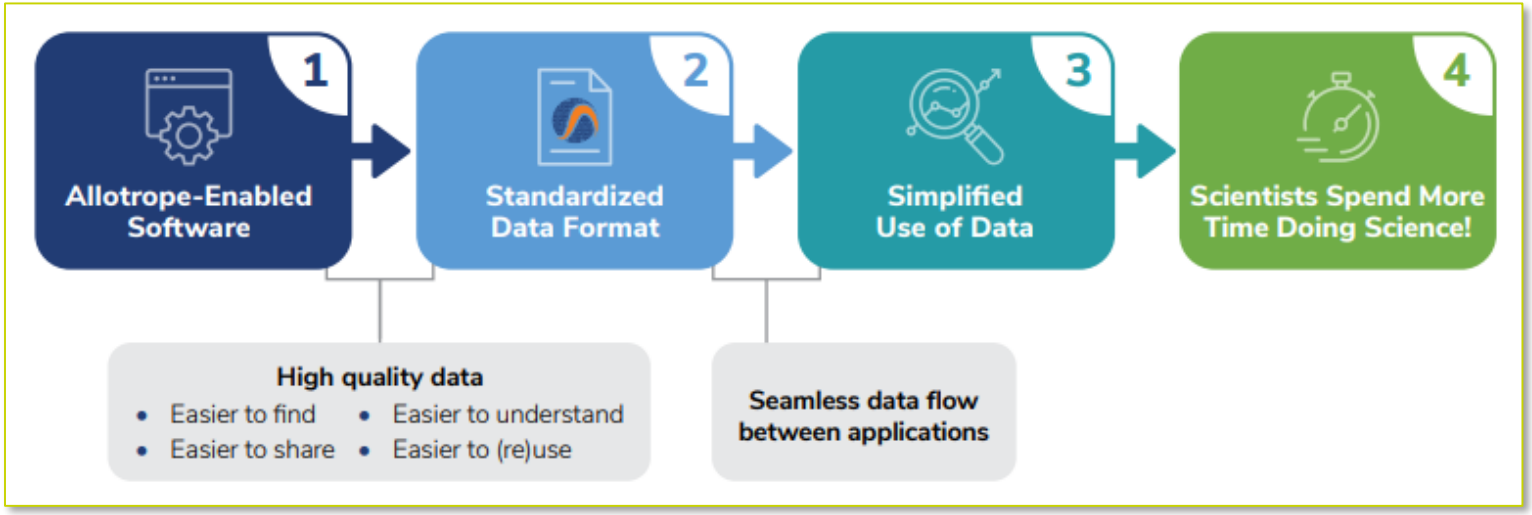
CLASS READING MODEL DIFFERENCES

- Better alignment with industry standard ontology approaches based on equipment class
- Directly tied to parameter templates to improve data association with procedure execution
- Creates measurements via “Processors” instead of “Parsers”

PATH FORWARD

- “Side by side” use with current equipment model
  - Existing configuration continues to operate as it does today
- Add class readings to existing configuration
  - Harmonize reference data across equipment types
- Current instruments can be switched to the new model when ready
  - Can be switched back if necessary providing a robust adoption path

WHAT SUCCESS LOOKS LIKE



Allotrope Foundation

Allotrope Partner Network

DASSAULT SYSTEMES


IF WE
TM