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Technology Enablers for Product Development through Commercialization: Proven Solutions

BSMA US

CONFIDENTIAL

INTRODUCTIONS

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- 30+ years industry experience
- 15 years leading clinical trial supplies departments in global bio/pharma
- Serves as European Membership Officer and Master of Ceremony for Global Clinical Supplies Group (GCSG)

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Current Forecasting Landscape: Technology

WORLD'S FIRST FULLY INTEGRATED RTSM & FORECASTING ENGINE

- **Challenge:** Most forecasting tools account for current demand of existing patients, ***but not*** unpredictable or partially known demand
- **Solution:** Fully integrated RTSM/supply forecasting engine
  - Automatically calculates unpredictable demand daily
  - System reacts to patients in screening and accounts for patients that may have upcoming titration & patients that don't have a defined dose

	CHALLENGES	SOLUTIONS
BUFFER	Buffer levels (trigger) are static and need to be defined manually	Buffer levels are automatically calculated – for sites and depots – and dynamically adapt to demand
FEEDBACK	No feedback from the system or scenario planning capabilities – black box	Scenario planning with dials and instant feedback. Actual values are only committed when assessed.
RE-SUPPLY	Little help with depot re-supply which is often done manually or in separate systems	Automatic, dynamic re-supply is extended to depot level

Industry Need – Improved Forecasting Solution

Excel – The Industry Standard	Available Commercial Tools	Ideal Clinical Demand & Supply Planning Tool
✗ Slow – Manual process	✗ Slow – Input changes and processing time	✓ Fast – Dynamically adjust forecast in moments
✓ Easy-to-use, known platform	✗ Complex – Difficult to verify outcome based on inputs	✓ Easy-to-use, intuitive
✗ Not automated, difficult to scale	✗ Not automated – Lack of integration, uncertainty applied to study duration	✓ Fully automated, adapts to any level of input
✗ Risk: Human error	✗ Risk: Lack of understanding, blindly trust results and expensive	✓ Opportunity: Powerful visualizations, scenario comparisons and real-time reporting
✗ Labor intensive	✓ Reproducibility at study level	✓ Ability to aggregate to compound and network level

D&SP INNOVATION

Natural Language Processing (NLP) Revolutionizes Demand & Supply Planning (D&SP)

Innovation: 4C™ D&SP

Speed

Simplicity

Control over Supply Decisions

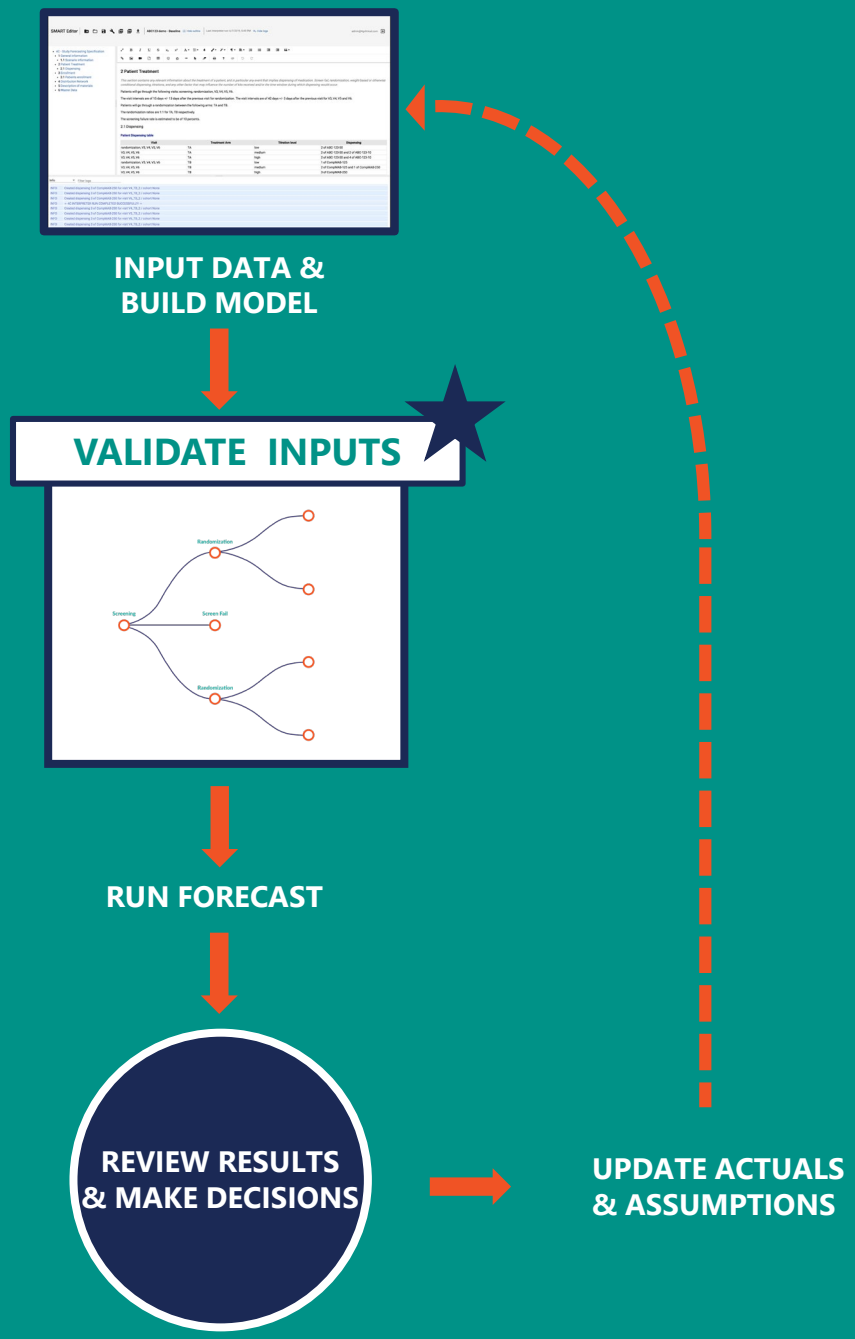
Dynamic Forecasting based on Study Lifecycle

Accuracy & Visibility

SPEED – 4C™ USER EXPERIENCE

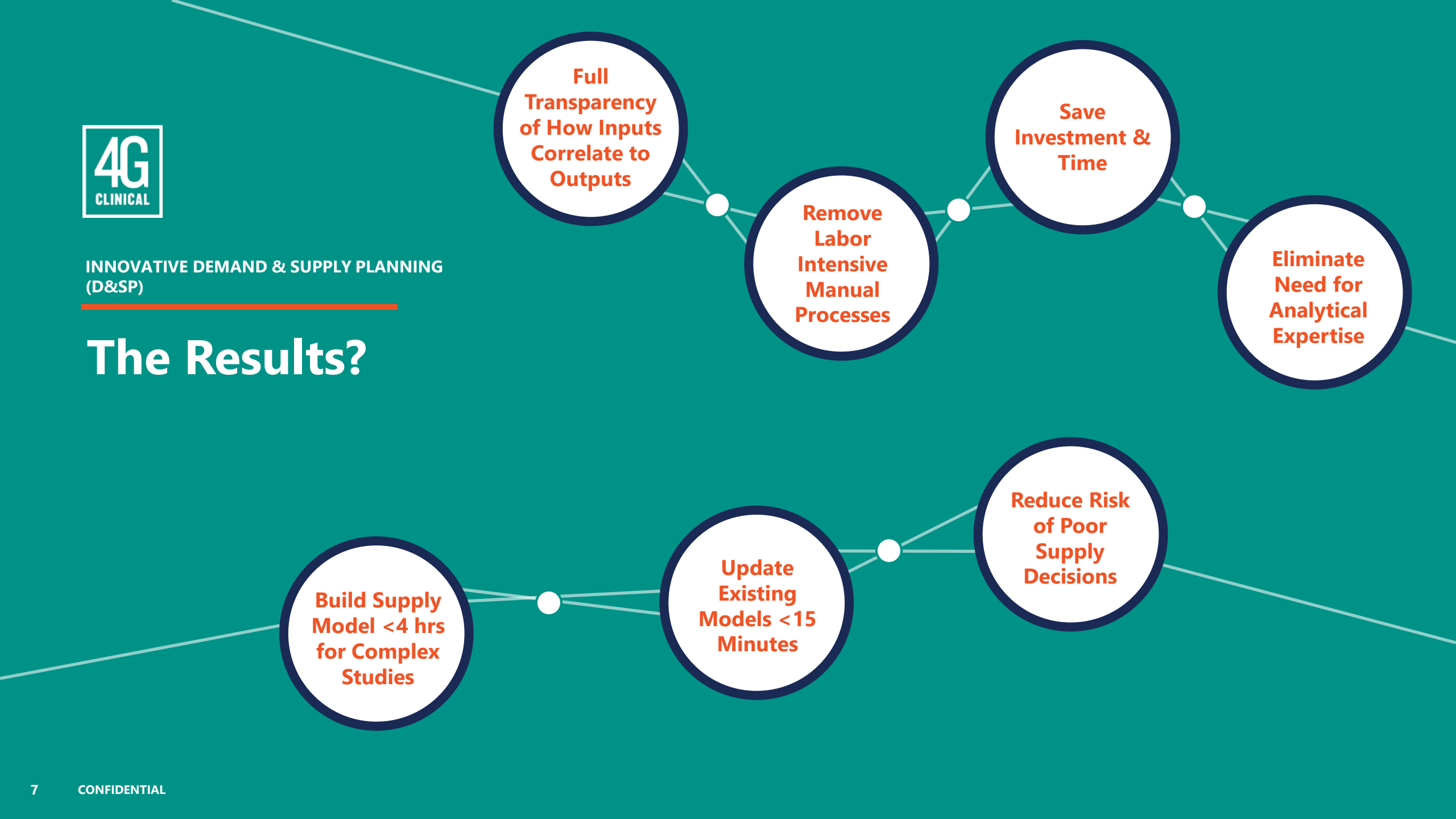
Simple Workflow – 5 Easy Steps

- Input data based on 4 key variables, within template
- Visually verify the inputs give the expected output
- Click "Run Forecast"
- Review results and enable key decisions
- Iterative process – Refine, rebuild, model and approve



INNOVATIVE DEMAND & SUPPLY PLANNING (D&SP)

The Results?



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THANK YOU

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