



Using Data Analytics to Support Knowledge Based Weather Decision Support Systems in the ATM

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UNISYS

Why Weather Matters to the ATM

Vulnerability...

- More air traffic requires closer spacing, better routing
 - Weather impacts the safe and efficient movement of people and commerce within a finite ground and air transportation grid
- Ground operations impacted by hazardous weather causes delays and impacts passenger comfort
- Airlines becoming more attuned to how the environment affects their business and profit margins



Growth in Weather Data and Information

“Big Data”

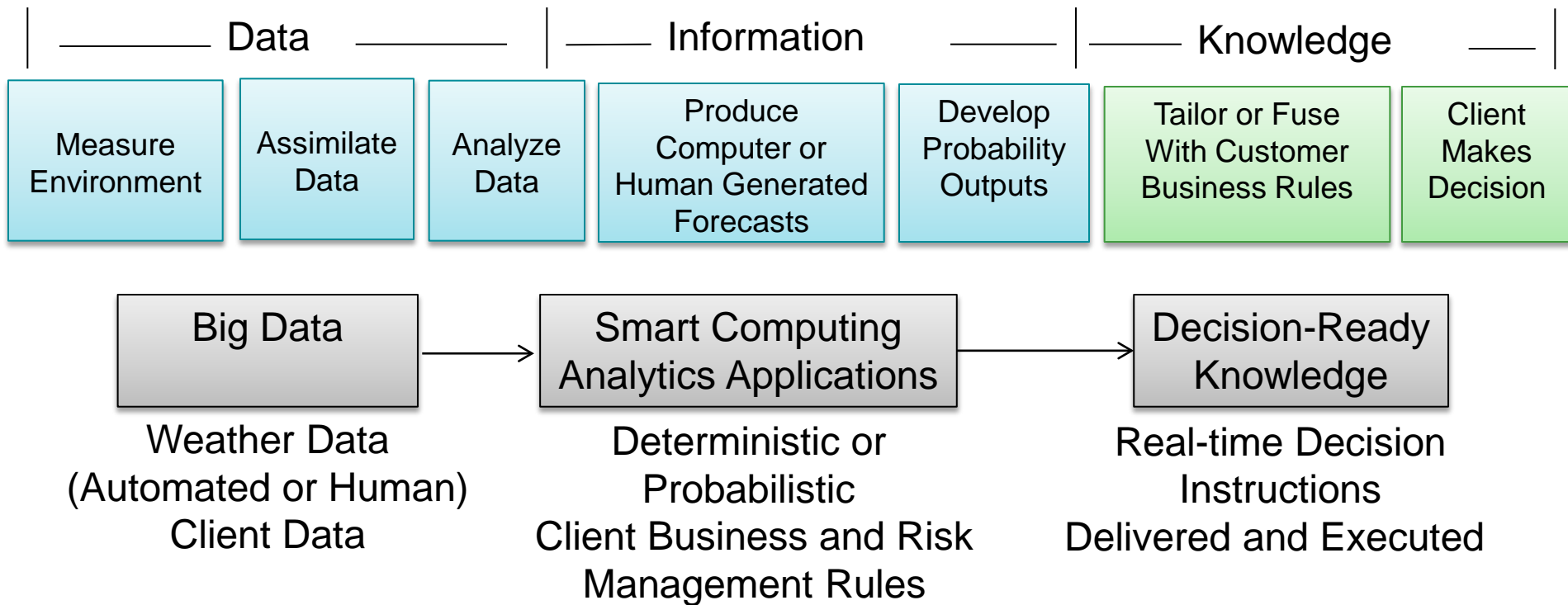
- Data is predicted to grow 800% over the next five years
 - 80% of that data growth will be attributable to unstructured data
 - Digital content doubling every 18 months, >80% growth driven from unstructured data

Anticipated Growth in Weather Data

- Upgraded weather radar, new satellites, higher resolution models, and increased observations
 - Capturing and storing the data is simple. It's what one can do with the vast amount of information that is critical...
- Rapid advancements in:
 - environmental probabilistic predictions
 - high performance computing at affordable costs
 - analytic capabilities that rapidly mine and fuse elements of information critical to optimize business decisions

Applying Analytics for Knowledge

- Mitigating or “planning out the weather” now feasible and will significantly increase productivity and operations efficiency of weather-sensitive businesses and industries



Timely, Secure, Efficient and Effective Operations Decisions