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CERTIFICATION COURSE

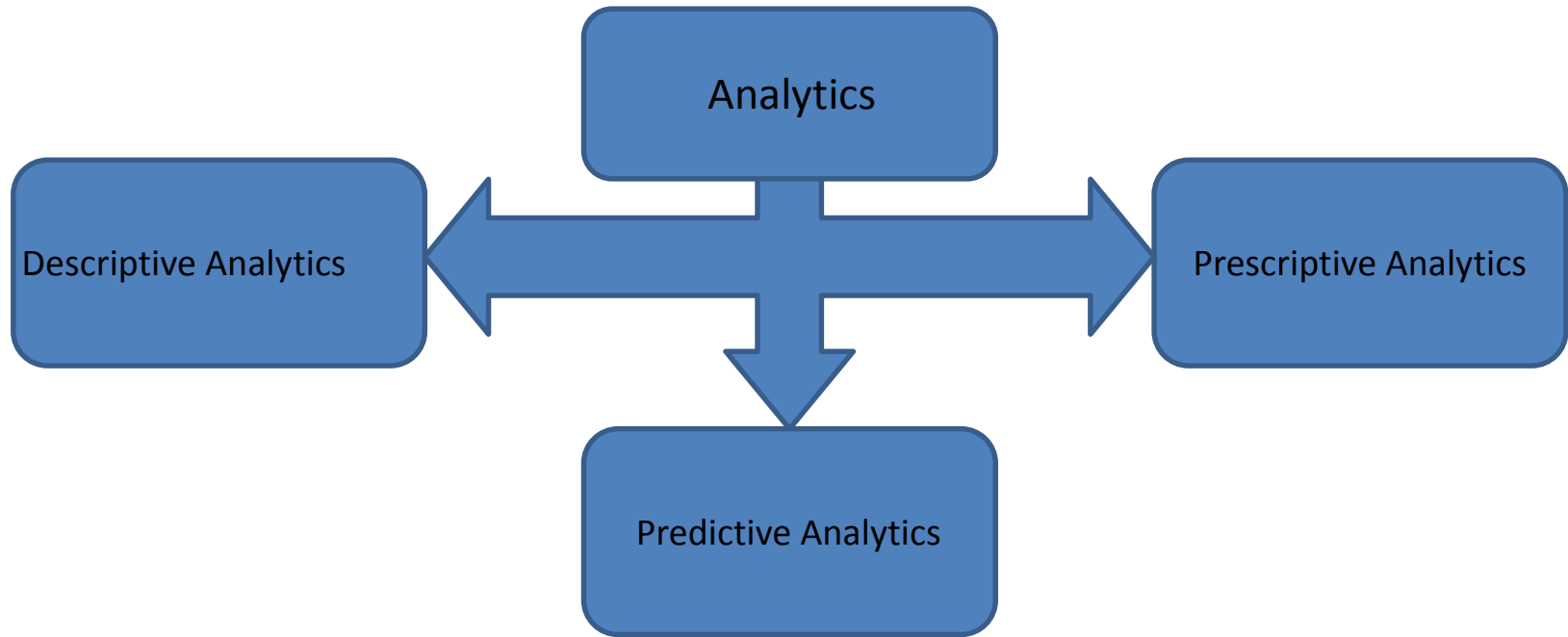
SUPPLY CHAIN ANALYTICS

Different types of Analytics in Supply Chain

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THREE BROAD CATEGORIES OF ANALYTICS

1.Descriptive Analytics – what has happened

Gathering, summarizing, and visualizing large datasets to reveal new business insights.



2. Predictive Analytics – what is likely to happen

using historical data to predict future outcomes; can use either statistical or machine learning (computer science) methods.



3. Prescriptive Analytics – what should happen

Using operations research tools to determine which decisions will lead to the best outcomes.

In SCM:

Optimization and/or simulation modeling



	Descriptive	Predictive	Prescriptive
	What HAS happened?	What COULD happen?	What SHOULD happen?
What the user needs to DO	Increase cross-channel fulfillment and shipments Reduce fulfillment, transport and inventory costs	Predict infrastructure failures, forecast facility space demands Predict costs and profits by customer, product, transport/fulfill and inventory stream, forecast profits and margins Predict capacities by customer, product, transport/fulfill and inventory stream, forecast capacities	Increase asset utilization Optimize resource schedules Remain agile and competitive. Increase asset/inventory utilization. Optimize efficiency and supply-demand in phase with shifts
What the user needs to KNOW	The number and types of asset failures Why transport/logistics costs are high The value of the multi-party inventory	How to anticipate sales/shipments for specific channels and assets/facilities When to consolidate underutilized facilities or to expand them How to determine and segment costs to improve service levels and cost (CTS) How to determine/rank baseline and future scenarios and costs to improve service levels and cost (CTS)	How to increase asset production Where to optimally route service technicians Which strategic facilities and DC network plans provide the highest long-term utilization and flexibility
How analytics gets ANSWERS	Standard reporting - What happened? Query/drill down - Where exactly is the problem? Ad hoc reporting - How many, how often, where?	Predictive modeling - What will happen next? Trends Forecasting - What if these trends continue? Simulation & Segmentation - What could happen? Control tower process, Alerts - What actions are needed?	Optimization - What is the best possible outcome? Random variable optimization - What is the best outcome given the variability in specified areas? Current State and Future State modeling and CTS segmentation - What is the best profit and logistics flow for each product and segment?
What Leaders do to make this POSSIBLE	Alerts, reports, dashboards, Business intelligence	Predictive models, forecasts, statistical analysis, scoring Trend in mix of transport lanes and modes. Forecasting - What if these trends continue?	Business and process rules, organization models, comparisons, optimization Closing the Loop on Planning and Execution. Supply Chain Agility and Efficiency

Source
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THANK YOU

