Big Data Analytics for Resource Management

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Business Problem

- High variation in the incoming order volumes
- Uneven workload management
- Undesired cross-functional training costs

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" Knowing future can help organize the present better. "

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Big data Analytics can help you predict the future volumes

Big Data value-add

- ▶ Gain Insight
- ▶ Take Proactive action
- ▶ Reduce waste
- ▶ Plan better strategy

Big Data Analytics: Gain Insight

- Gain insight into
  - Volume Inflows
  - Process flow
  - Work Labour Skills

Big Data Analytics: Gain Insight

- Gain insight into
  - Volume Inflows
    - When and how many orders are coming
    - What is the complexity of incoming orders and how it is varying
    - How the inflow volumes are trending over time
  - Process flow
  - Work Labour Skills

Big Data Analytics: Gain Insight

- Gain insight into
  - Volume Inflows
  - Process flow
    - What are the bottlenecks in the flow
    - Which non-value-add activities can be eliminated
    - Which processes are impacting the SLAs (Lead-times, CSAT…)
  - Work Labour Skills

Big Data Analytics: Gain Insight

- Gain insight into
  - Volume Inflows
  - Process flow
  - Work Labour Skills
    - Which skills are the most needed for which type of order and where
    - Which skills can be easily upgraded /cross-trained and which are not
    - Who are the most critical resources (cannot afford to let go)
    - Who needs what trainings and what is the least-cost training regime

Big Data Analytics: Act Proactively

- ▶ Take proactive action
  - ▶ Know your order volumes before they arrive
  - ▶ Meet the inflow order demands with right labour scheduled for right task
  - ▶ Optimize inventory costs
  - ▶ Improve processes to meet the varying demand needs
    - ▶ Define complexity classes for the orders based on their needs
    - ▶ Design SLAs specific to each complexity class

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Big Data Analytics: Reduce Waste

- Waste Reduction
  - Eliminate the non-value-add cross-functional trainings
  - Remove process bottlenecks and reduce the lead-times
  - Avoid unnecessary inventory stocking

Big Data Analytics: Plan Better

- What-if Analysis for better business strategy
- Social media sentiment analysis for better reach

Big Data Analytics: Plan Better

- ▶ What-if Analysis for better business strategy
  - ▶ Simulate alternate business models without disrupting the operations
  - ▶ Design optimal price modelling strategies
- ▶ Social media sentiment analysis

Big Data Analytics: Plan Better

- ▶ What-if Analysis for better business strategy
  - ▶ Simulate alternate business models without disrupting the operations
    - ▶ How would my incoming orders vary if I remove an offering from my menu?
    - ▶ How would my CSAT get affected if I change my SLAs?
    - ▶ What happens if I replace one resource with another for a particular task?
  - ▶ Design optimal price modelling strategies
    - ▶ E.g.: Dynamic pricing models that vary with volume, loyalty and season …
    - ▶ Explore new/alternate subscription offerings and price point opportunities
- ▶ Social media sentiment analysis

Big Data Analytics: Plan Better

- What-if Analysis for better business strategy
- Social media sentiment analysis
  - Retain your loyal customers and top-performing assets
  - Evaluate your services/products against your competitors'
  - Gain new customers and identify potential sale leads

Big Data Analytics: Plan Better

- What-if Analysis for better business strategy
- Social media sentiment analysis
  - Retain your loyal customers and top-performing assets
    - Know what is it that your customers like (and dislike) most about your service
    - What is making them leave (or stay with) your service
  - Evaluate your services/products against your competitors'
    - Know how your new product might be received (before hand)
    - Identify cross-sale and up-sale opportunities
  - Gain new customers and identify potential sale leads
    - Capture the Buy intents
    - Convert interests into buy intents

Big Data Analytics: Methodology

- ▶ Analyze the data to define and identify the complexity classes
- ▶ Automatically classify the incoming orders into complexity classes
- ▶ Analyze the human resource / utilization data and identify the skill-groups
- ▶ Automatically classify the human resources into different skill-groups

Big Data Analytics: End Produce

- ▶ Recommendation Engine
- ▶ Order forecasting

Big Data Analytics: End Produce

- ▶ Recommendation Engine
  - ▶ Matching the incoming orders to the right skill set labor
  - ▶ Suggesting right labor for training selection (reduce unnecessary training costs)
- ▶ Order forecasting
  - ▶ Analyze the trend of orders and forecast the future order trend
  - ▶ Inventory / labor management to keep-up with the expected order demands
  - ▶ Setup/Tune SLAs tuned to match the labor and order demand

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Big Data Analytics: End Result

- *Actionable Insights* that let you make *Informed Decisions*

Big Data Analytics: End Result

- Actionable insights
  - Insight into what is causing the variation in the volume
  - Insight into CSAT drivers
- Make Informed Decisions
  - How does orders get impact if you make changes to the SLAs
  - How does business get impact if you make changes to the HR

Do More.

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