# Pengantar Business & Data Analytics

ASTRA HONDA MOTOR – FINANCE DEPARTMENT

JAKARTA, FEBRUARI 2019

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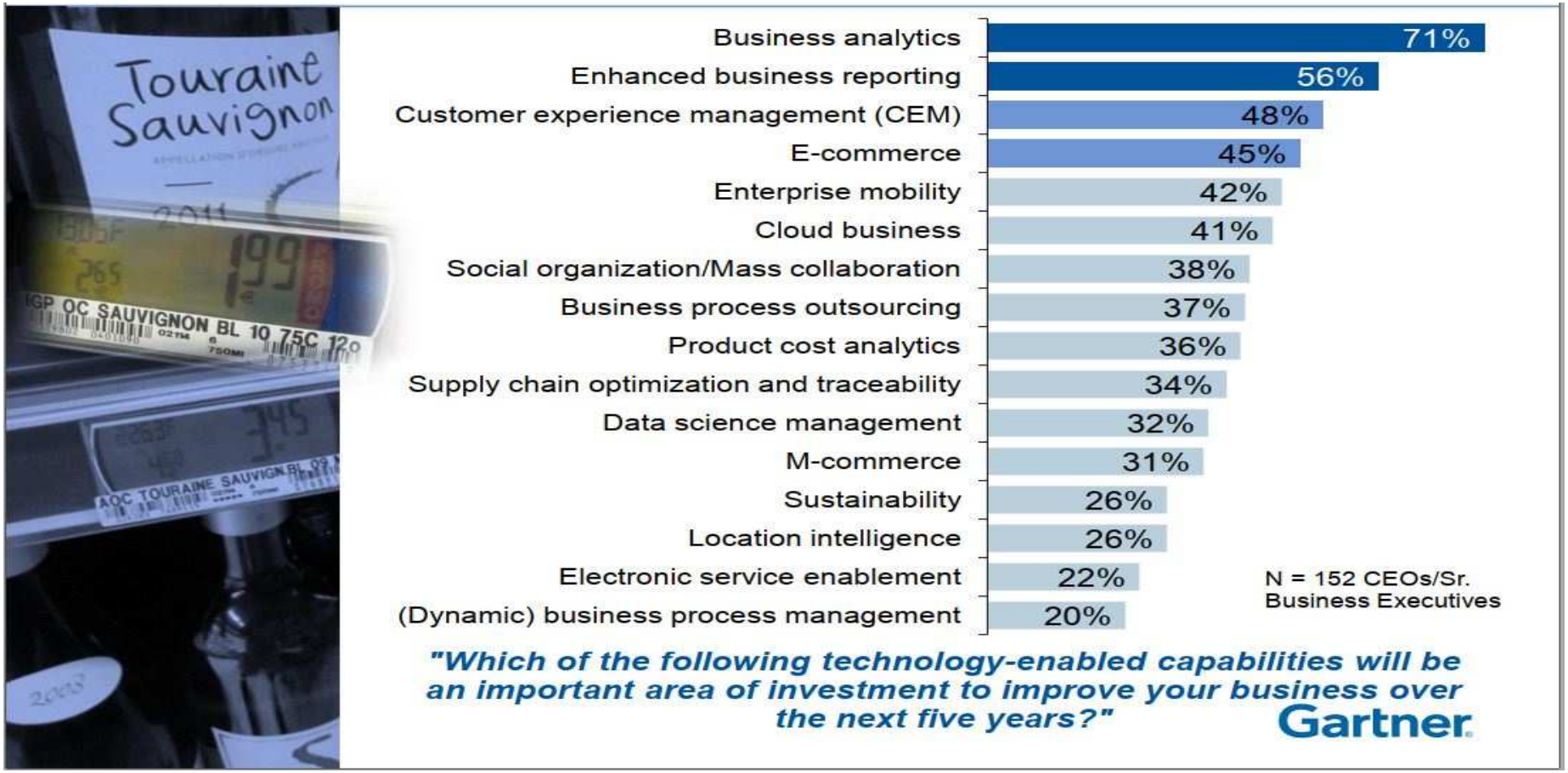
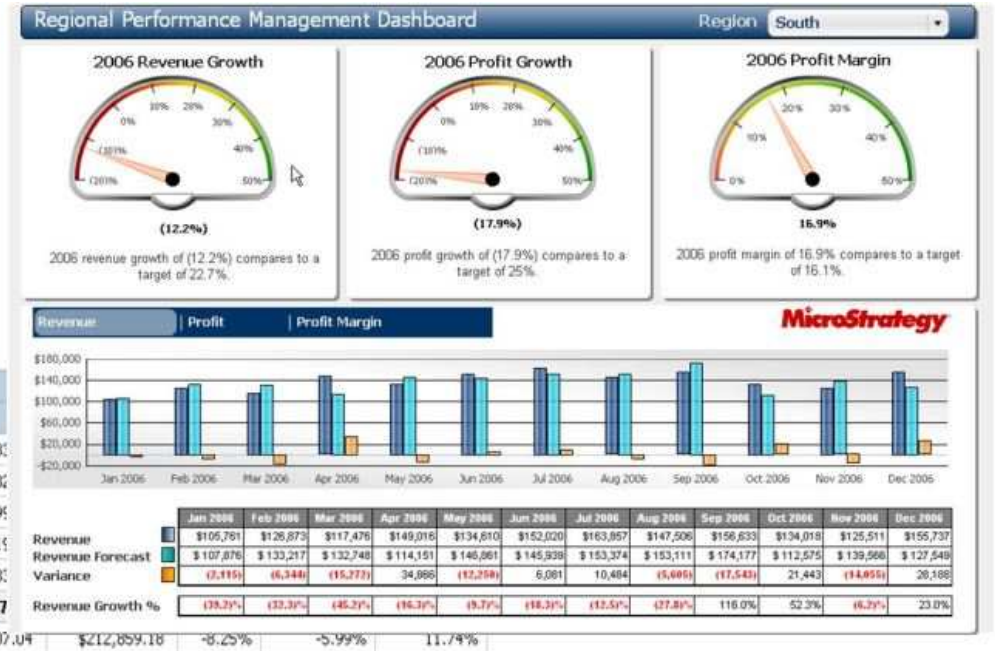
# Where to Invest to Improve Business?



# Traditional Data Analyst

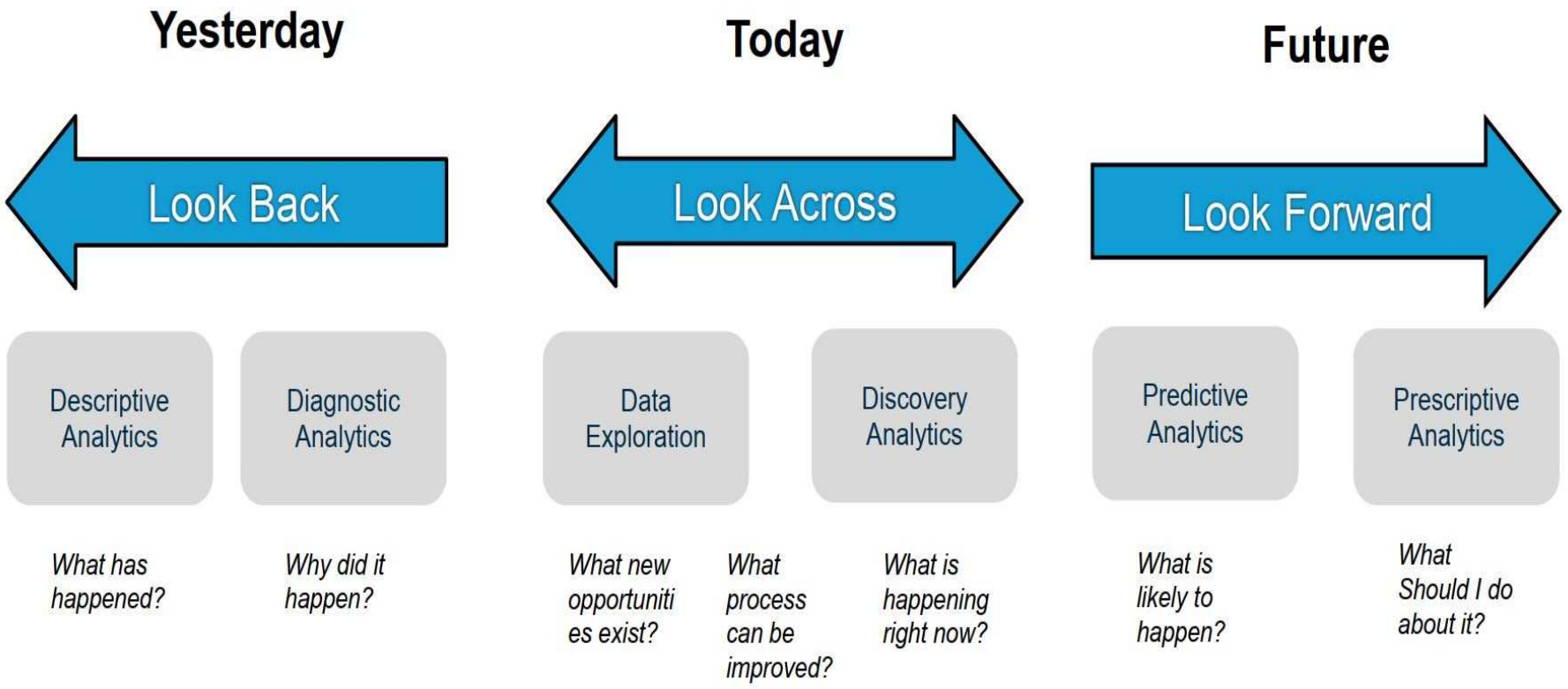
# Report Example



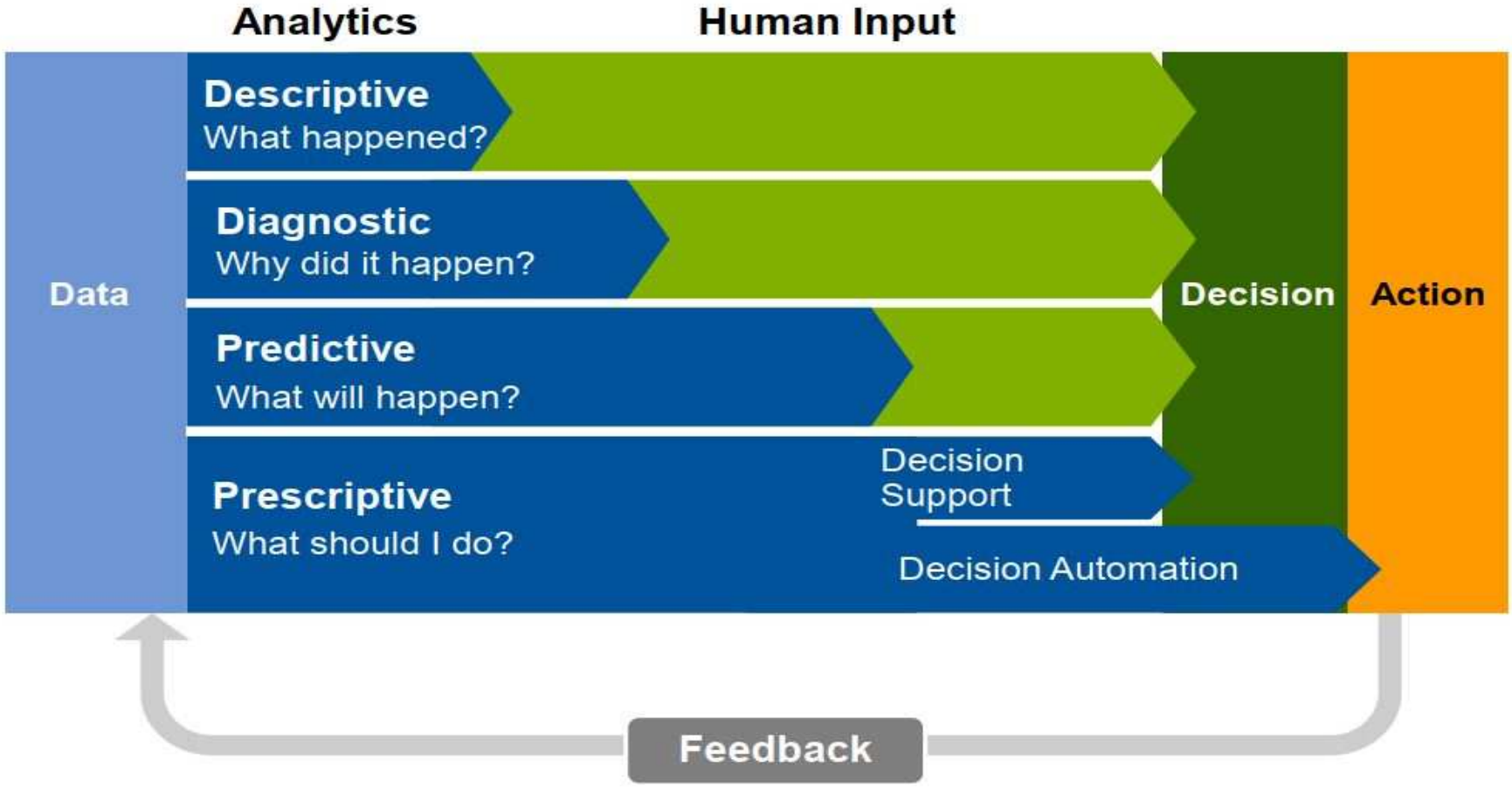

## Revenue Growth for France

| Revenue | | | France | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2004 | 2005 | | | | |
| Camping Equipment | Cooking Gear | | $125,516.26 | $116,73 | | | | |
| | Sleeping Bags | | $290,767.50 | $275,28 | | | | |
| | Packs | | $431,071.22 | $427,49 | | | | |
| | Tents | | $683,882.82 | $661,31 | | | | |
| | Lanterns | | $271,296.92 | $250,13 | | | | |
| | **Camping Equipment** | | **$1,802,534.72** | **$1,730,967** | | | | |
| Golf Equipment | Irons | | $166,643.98 | $232,007.04 | $212,859.18 | -8.25% | -5.99% | 11.74% |
| | Putters | | $50,940.44 | $70,509.90 | $66,185.02 | -6.13% | -11.65% | 7.50% |
| | Woods | | $274,651.14 | $379,567.72 | $363,065.56 | -4.35% | -0.50% | 13.54% |
| | Golf Accessories | | $15,766.26 | $23,807.34 | $21,825.10 | -8.33% | -7.12% | 0.92% |
| | **Golf Equipment** | | **$508,001.82** | **$705,892.00** | **$663,934.86** | **-5.94%** | **-3.54%** | **11.96%** |
| Mountaineering Equipment | Climbing Accessories | | $0.00 | $97,473.96 | $133,150.90 | 36.60% | 15.53% | 15.58% |
| | Tools | | $0.00 | $123,172.52 | $178,540.72 | 44.95% | 14.59% | 17.73% |
| | Rope | | $0.00 | $281,037.78 | $390,477.30 | 38.94% | 15.02% | 16.42% |
| | Safety | | $0.00 | $41,201.58 | $58,402.34 | 41.75% | 15.18% | 17.27% |
| | **Mountaineering Equipment** | | **$0.00** | **$542,885.84** | **$760,571.26** | **40.10%** | **15.02%** | **16.66%** |

# Expanding Role of Data Analyst



# Towards Automated Decision



# Intelligence vs. Analytics

Traditional BI

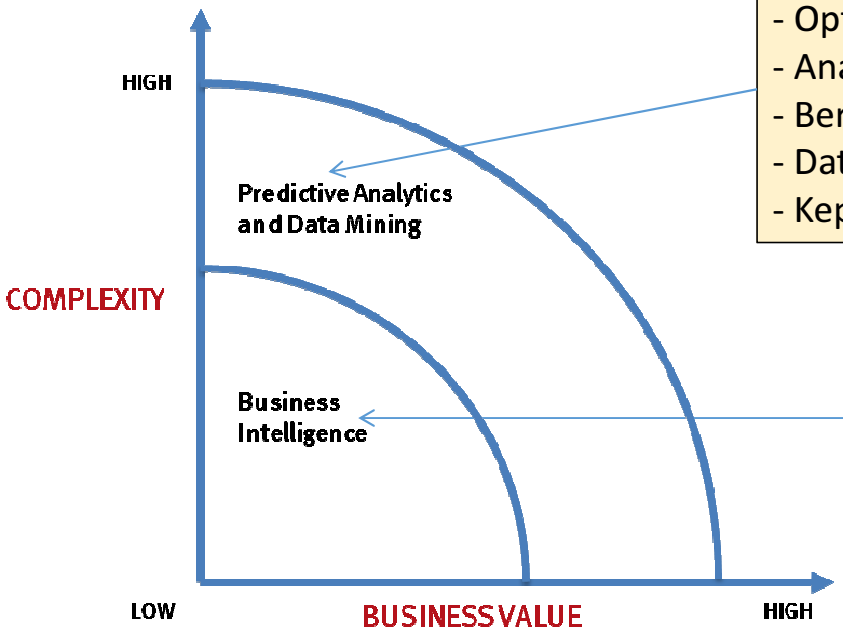
- Standard reports and dashboards
- Ad hoc reports – Current performance
- Query Drill down
- Cube analysis – Slice and dice
- Alerts

Vs.

Business Analytics

- Statistical Analysis
- Forecasting
- Predictive modeling
- Optimization

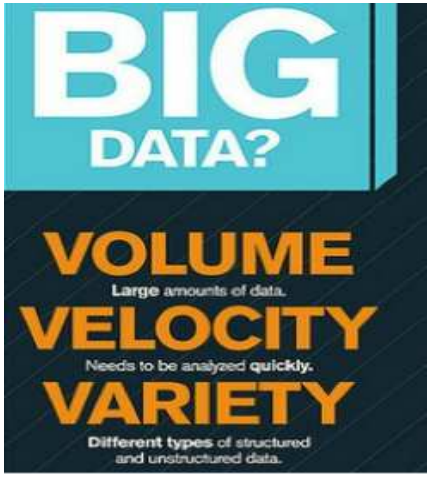
# Intelligence vs Analytics

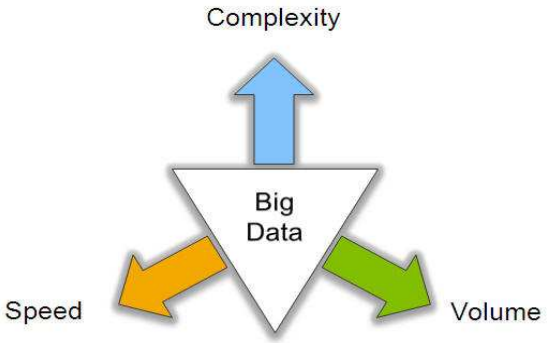


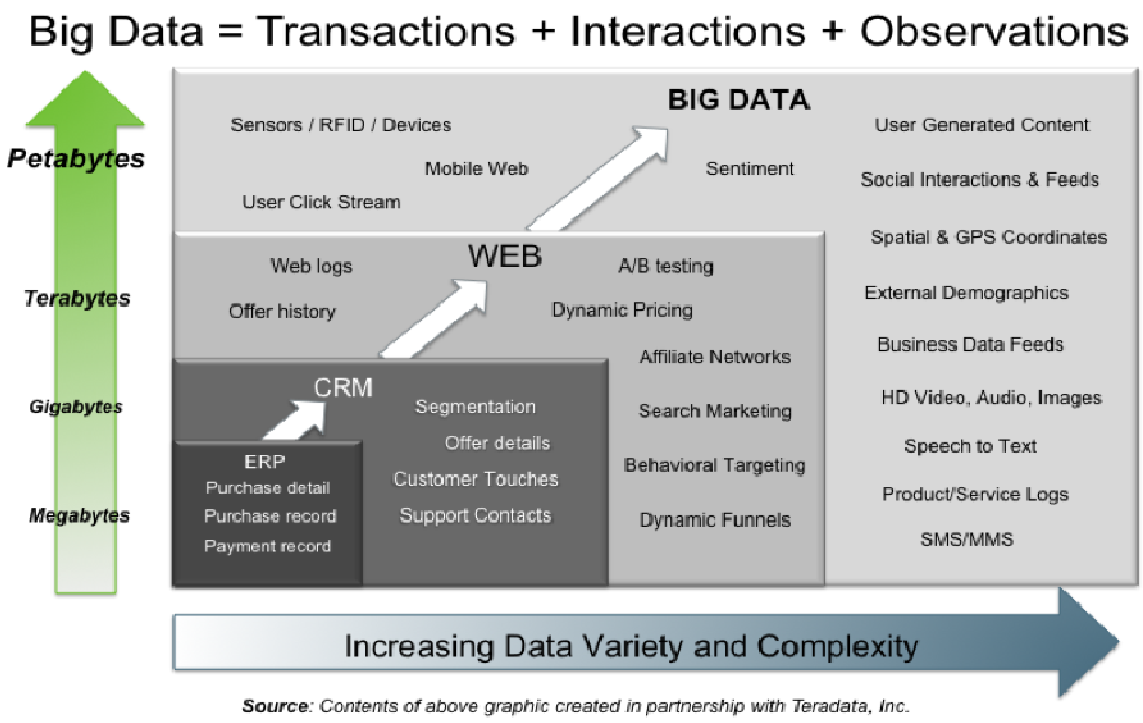

- Optimisasi dan predictive analytics
- Analisa statistik yang kompleks
- Berbagai tipe dan sumber data
- Dataset yang sangat besar
- Keputusan mendekati real-time

- Pencarian and pelaporan ad-hoc
- Teknik data-mining
- Sumber data pd umumnya: data terstruktur
- Ukuran data-set kecil sampai menengah

# Data Landscape Today

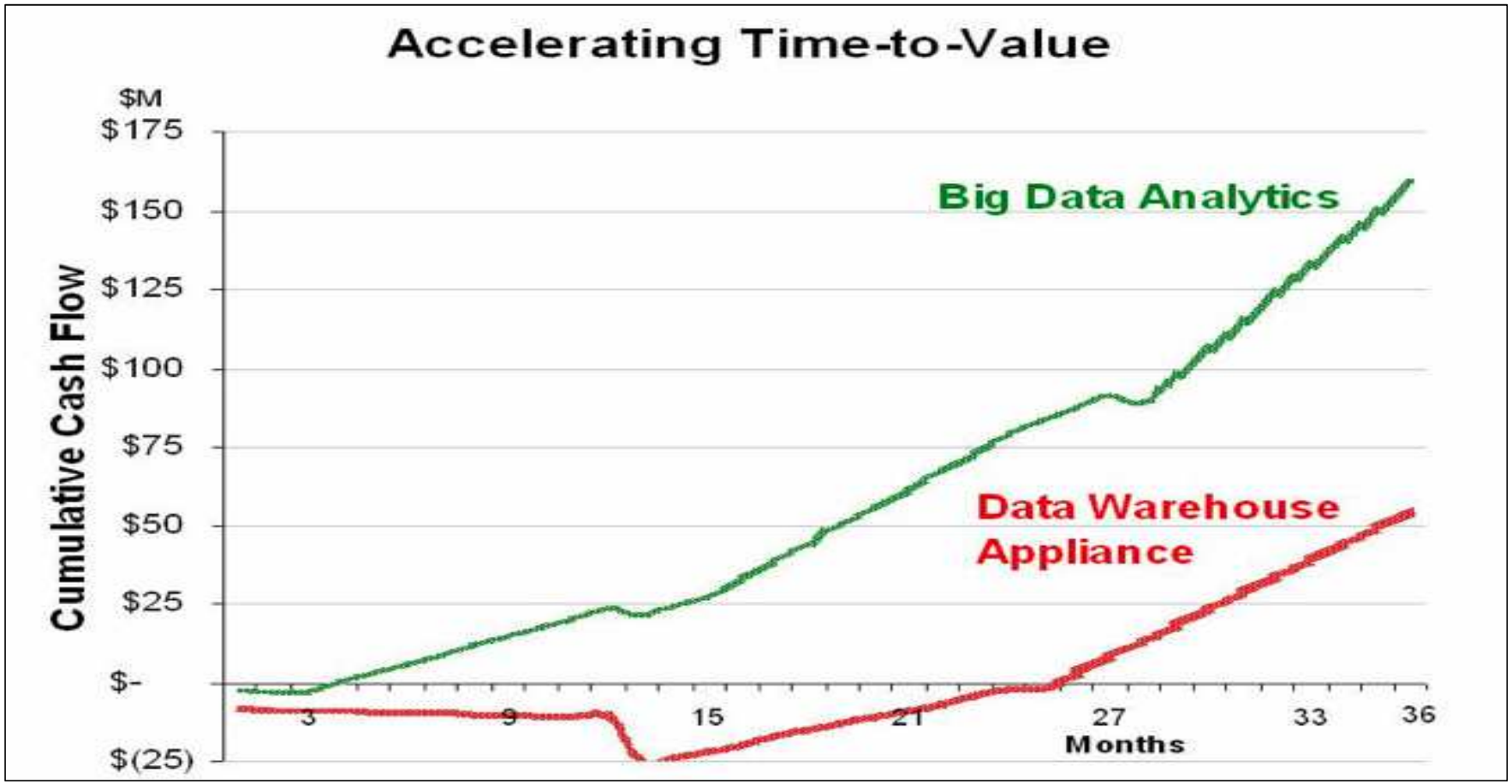



*Source: Contents of above graphic created in partnership with Teradata, Inc.*

# Economics of Data Analytics



# Beneficiary

## 1 ) Analytics for Humans

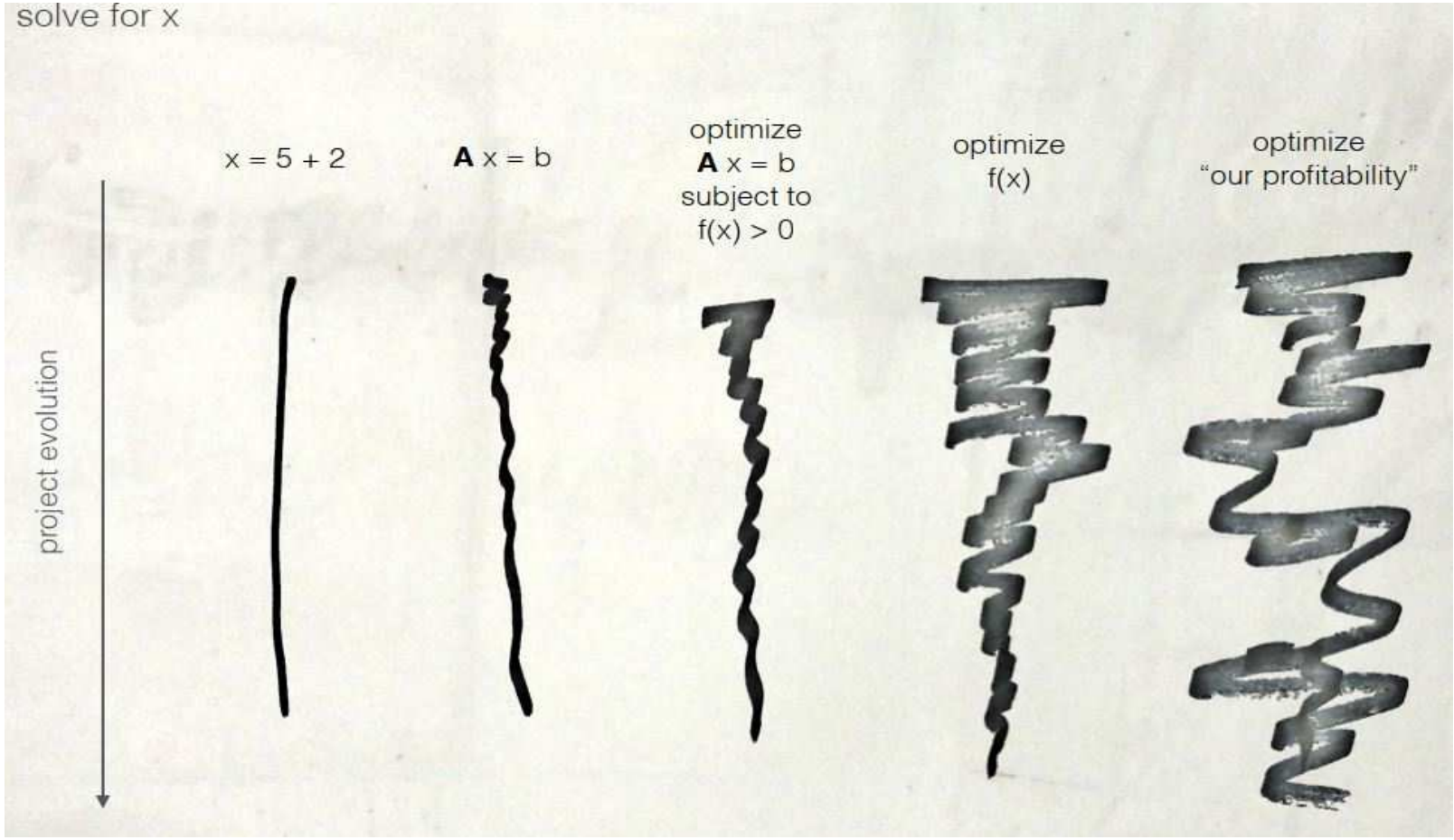
- Another **human is the final decision maker** and consumer of the analysis
- Must be **comfortable coming to higher-level conclusions – the "why" and "how"**
- Telling a story from the data

# Beneficiary

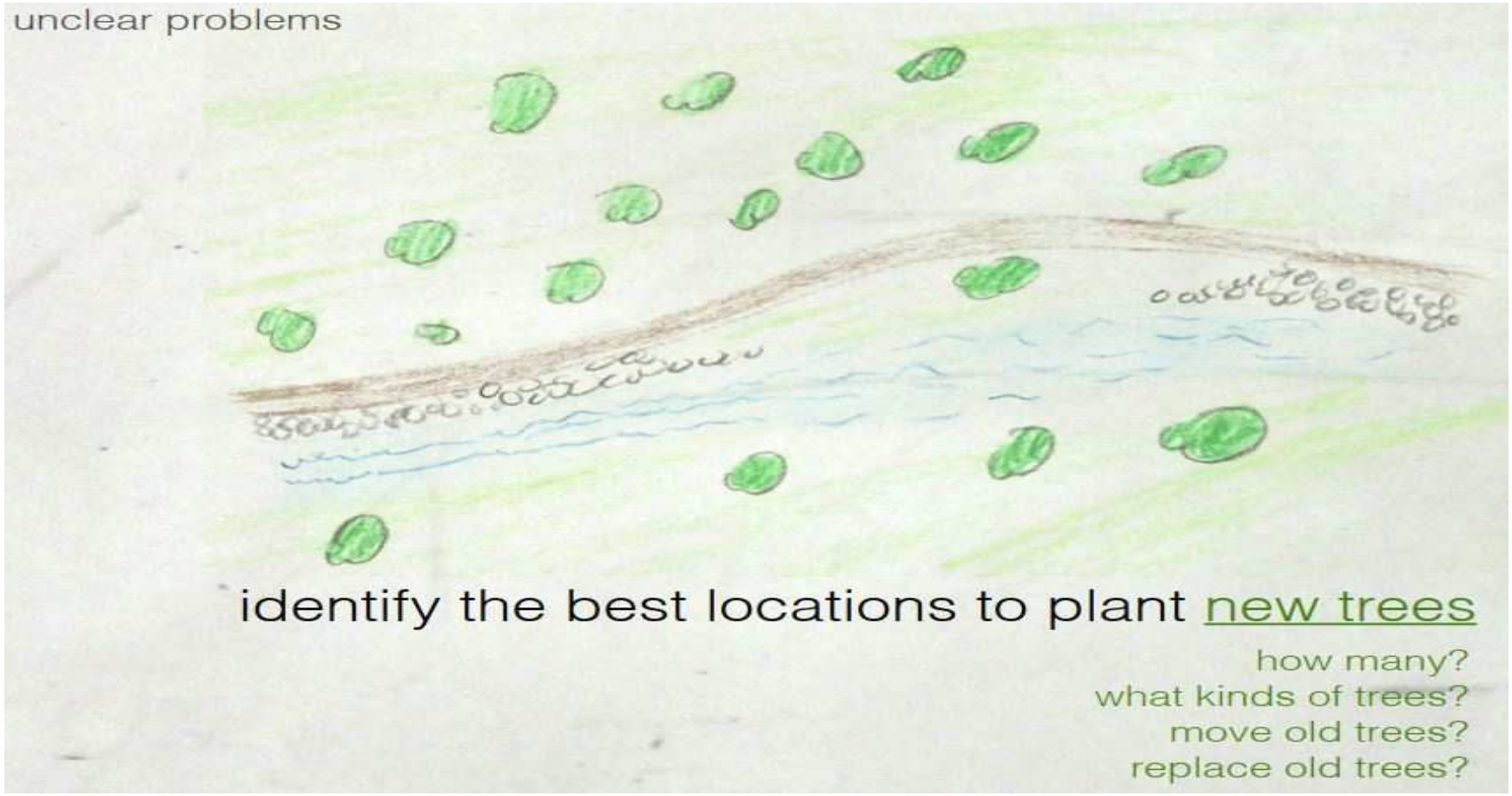
## 2) Analytics for Machines

- The **final decision maker** and consumer of the analysis **is a computer**
- Creating computer **algorithms and models**
- **Their digital models are established and then act on their own**
  - automatically trade in the stock market
  - Decide ads to display for online content/advertising targeting, or
  - Personalized product recommendations
- must have remarkably **strong mathematical, computational, and statistical skills and data modelling**
- So that systems can make quality predictions quickly.

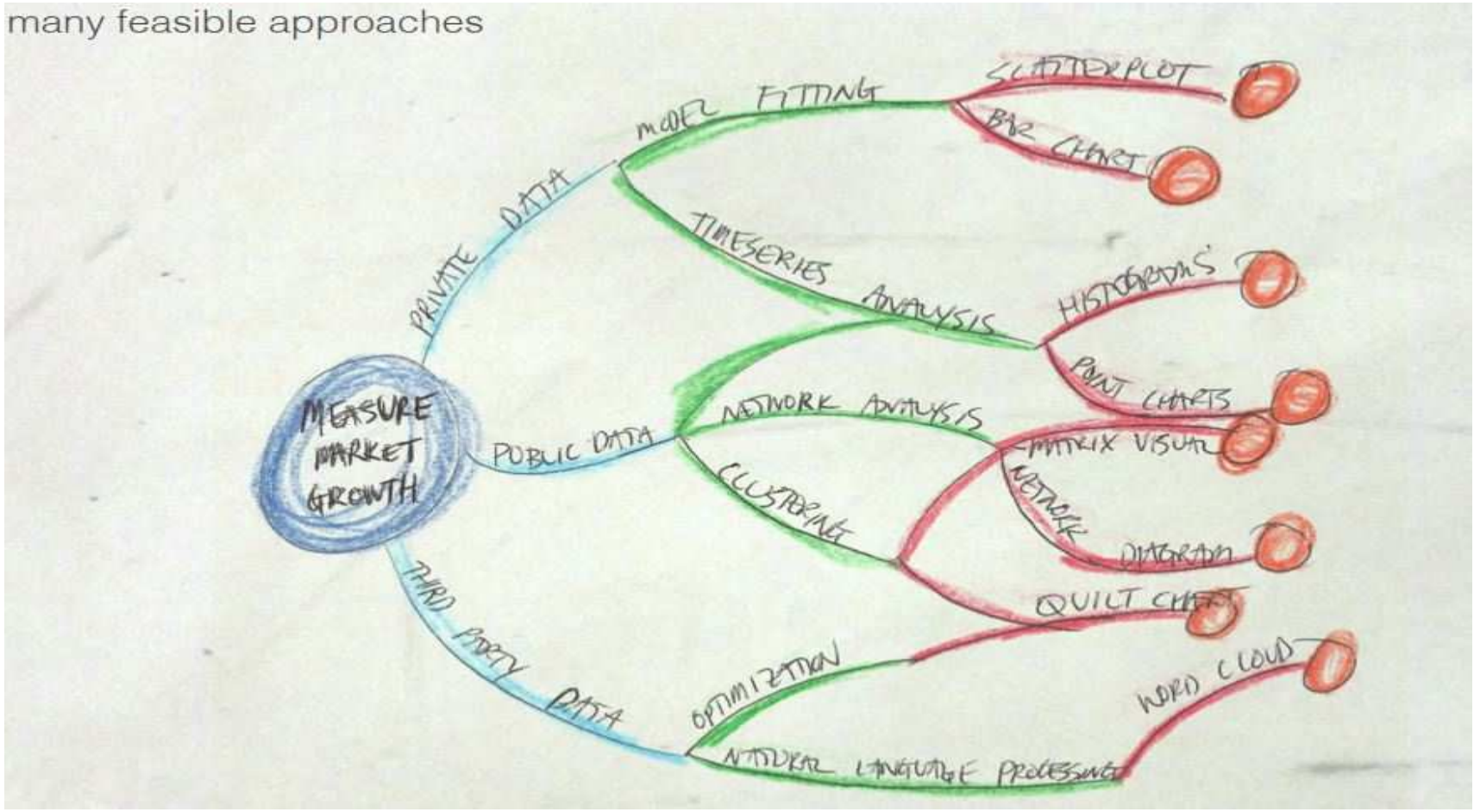
# Typical Problem to Solve



# Problem Type



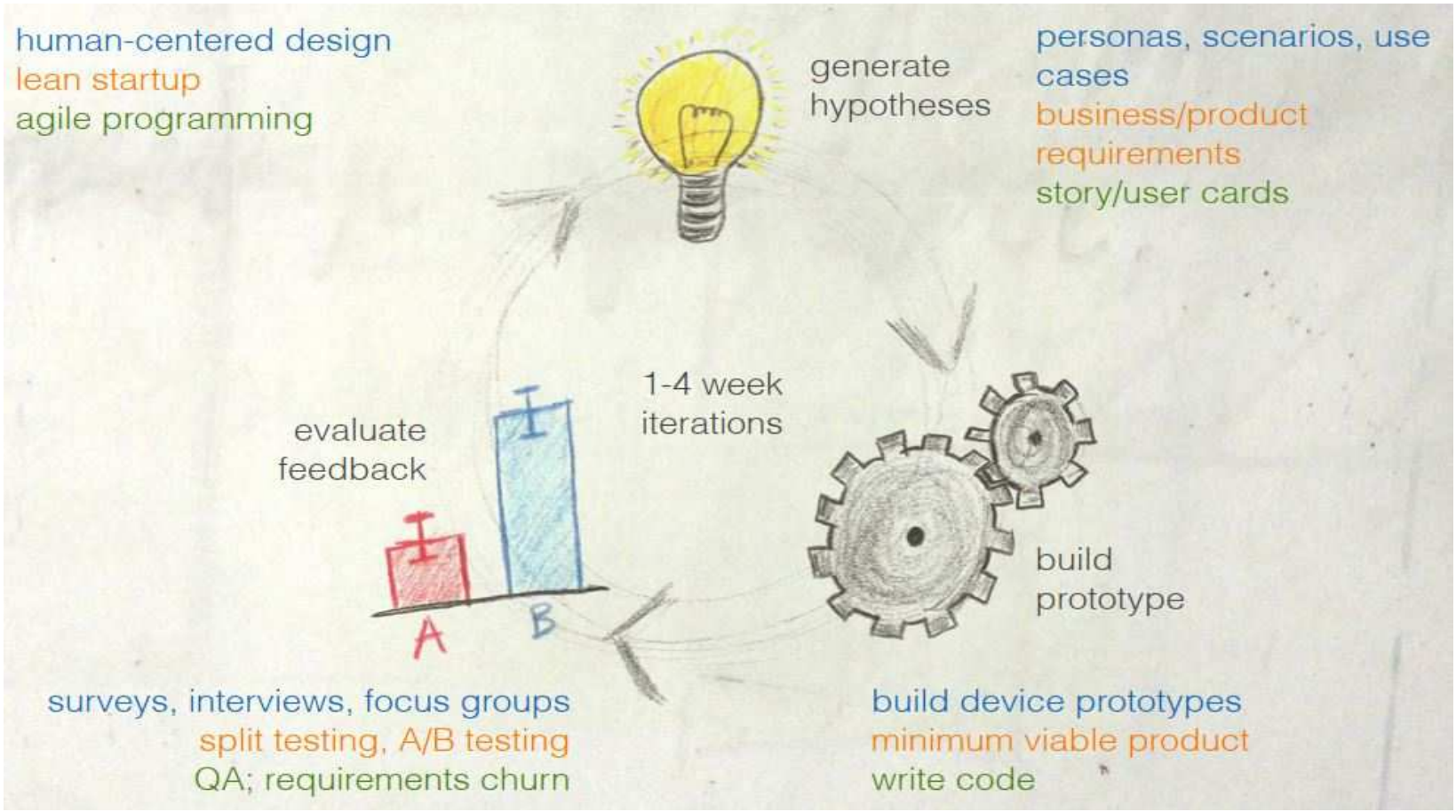
# Type of Approach



# Thinking Guidelines

- **Context:** What are you trying to achieve? Who is invested in the project's results? Are there any larger goals or deadlines that can help prioritize the project?
- **Need:** What specific needs could be addressed by intelligently using data? What will this project accomplish that was impossible before?
- **Vision:** What will meeting the need with data look like? Is it possible to mock up the final result? What is the logic behind the solution?
- **Outcome:** How and by whom will the result be used and integrated into the company? How will the success of the project be measured?

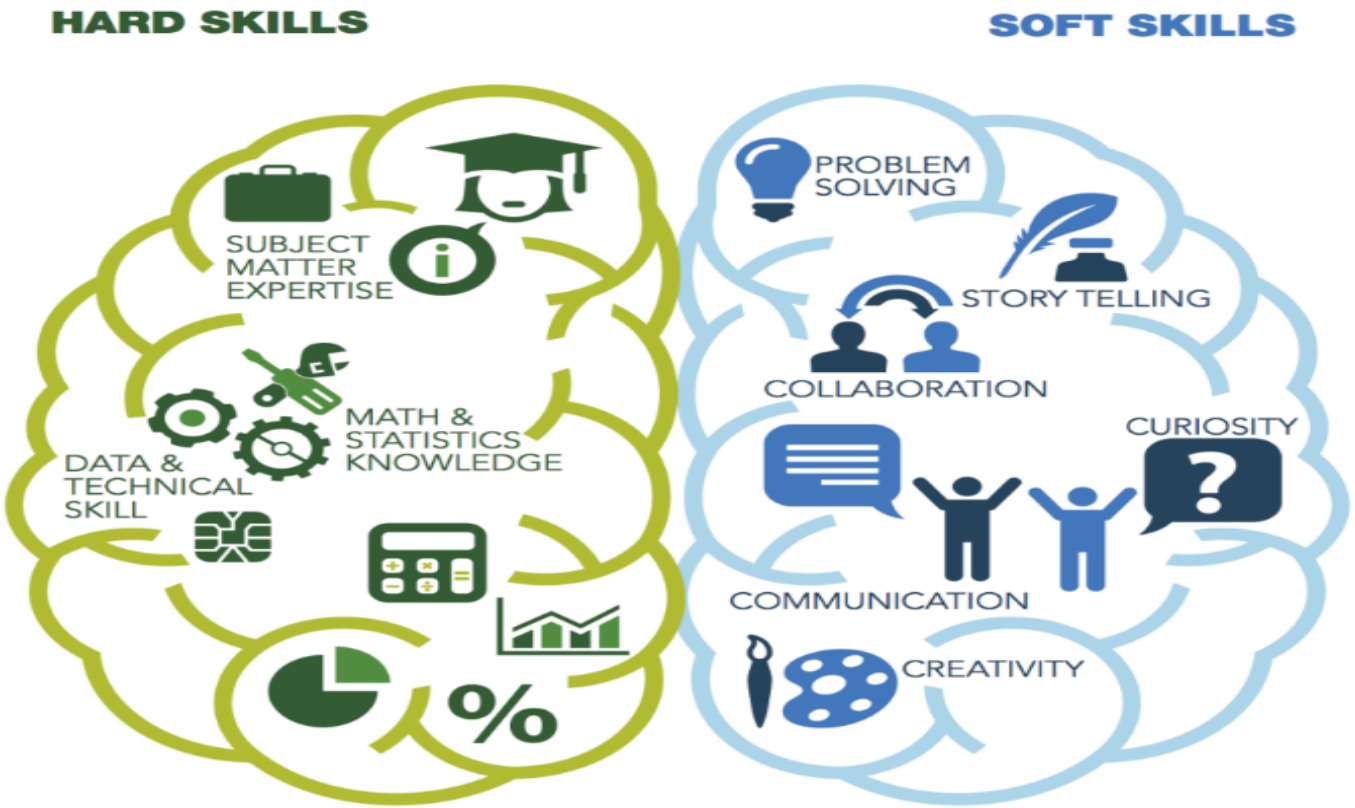
# Analytics Process



# Analytics Talent

1. People who love data (slice and dice it)
2. Able to communicate effectively with people and good presentation skills.
3. Knowledge and experienced
4. A working knowledge of the most commonly used programming languages for analyzing large digital datasets
5. Insight competence

# Hard vs Soft Skills



**Program Training Digital Innovation & Data Analytics**

| Topic | Module | | Duration |
|---|---|---|---|
| Introduction To Data Analytics & Innovation | Modul 1 | Building Blocks | 120 minutes |
| | Modul 2 | Data Structure | 120 minutes |
| | Modul 3 | Application Structure | 120 minutes |
| | Modul 4 | Data Analysis | 120 minutes |
| Data Visualization | Modul 5 | Conceptual Framework for Data Visualization | 120 minutes |
| | Modul 6 | Basic Charting | 120 minutes |
| | Modul 7 | Intermediate Charting | 120 minutes |
| | Modul 8 | Applied Visualizations | 120 minutes |
| Quantitative Analysis | Modul 9 | Practical Statistics | 120 minutes |
| | Modul 10 | Modeling | 120 minutes |
| | Modul 11 | Data Science I | 120 minutes |
| | Modul 12 | Data Science II | 120 minutes |
| Problem Solving | Modul 13 | Problem solving Framework in Data Science | 120 minutes |
| | Modul 14 | Case 1: Driving Visual Analysis with Automobile Data | 120 minutes |
| | Modul 15 | Case 2: Stock Investment Analysis | 120 minutes |
| | Modul 16 | Case 3: Predicting Customer Churn | 120 minutes |
| Mental Readiness | Modul 17 | Pengantar Business & Data Analytics | 120 minutes |
| | Modul 18 | TBD | 120 minutes |
| | Modul 19 | TBD | 120 minutes |
| | Modul 20 | TBD | 120 minutes |

# Terima kasih!

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