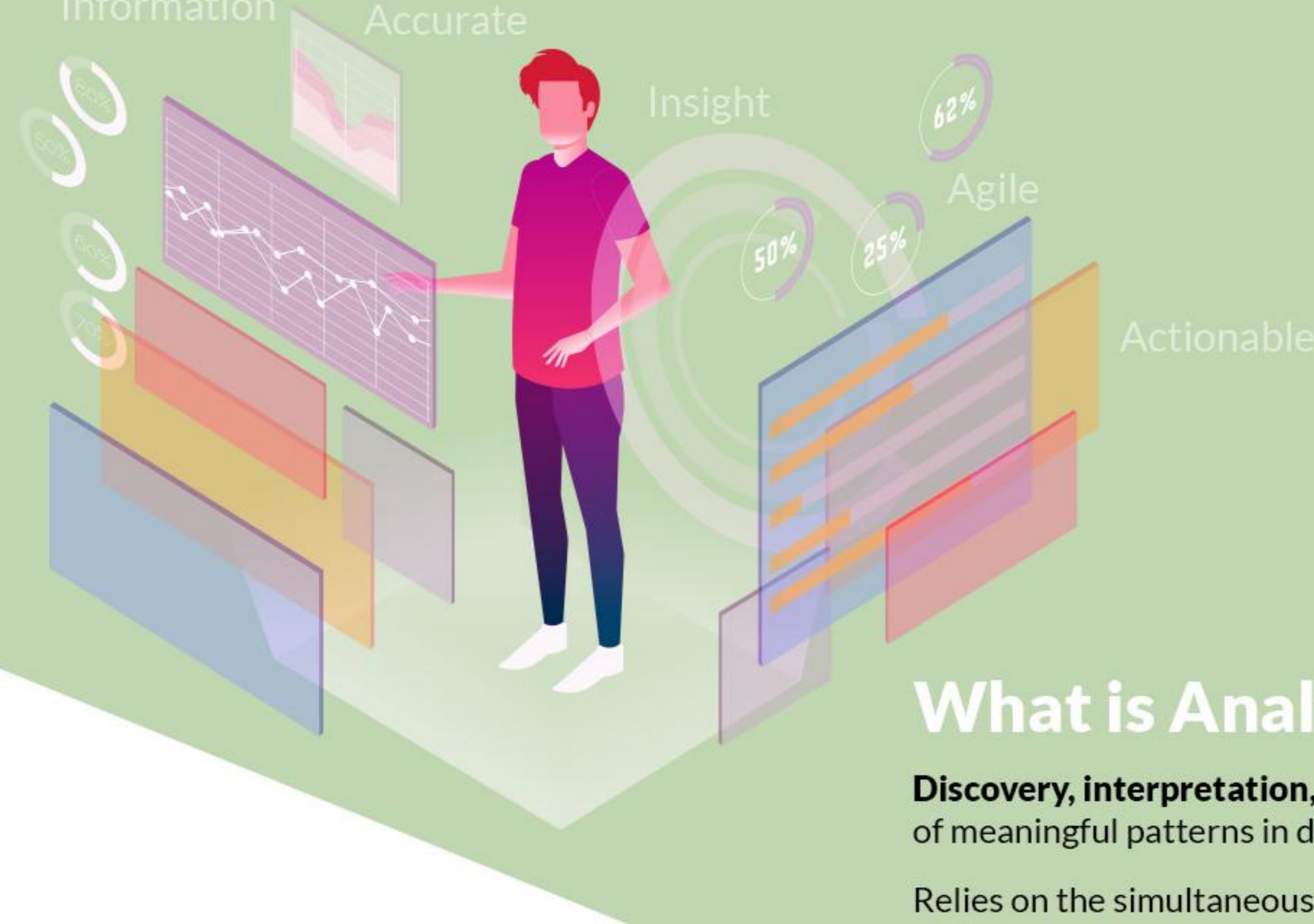


ANALYSING THE ANATOMY OF ANALYTICS



What is Analytics?

Discovery, interpretation, and communication of meaningful patterns in data.

Relies on the simultaneous application of statistics, computer programming and operations research to quantify performance.

CORE TYPES OF ANALYTICS



- ✓ **DESCRIPTIVE**
What is happening and why? (Information)
- ✓ **DIAGNOSTIC**
What happened and why? (Information - Hindsight)
- ✓ **PREDICTIVE**
What might happen? (Knowledge in advance - Foresight)
- ✓ **PRESCRIPTIVE**
What should be done to prevent something or optimise the prediction? (Optimisation - Foresight)
- ✓ **COGNITIVE**
Mimicking the human brain by drawing inferences from existing data and patterns leveraging Semantics, AI, Deep Learning and Machine Learning (Learning)

Bifurcations can be drilled further based on the type of Solution (Data Management, Data Visualization etc.), Application (ERP, SCM etc.), Industry (BFSI, IT & Telecom, Manufacturing etc.) or even Deployment (Cloud, On-Premise).

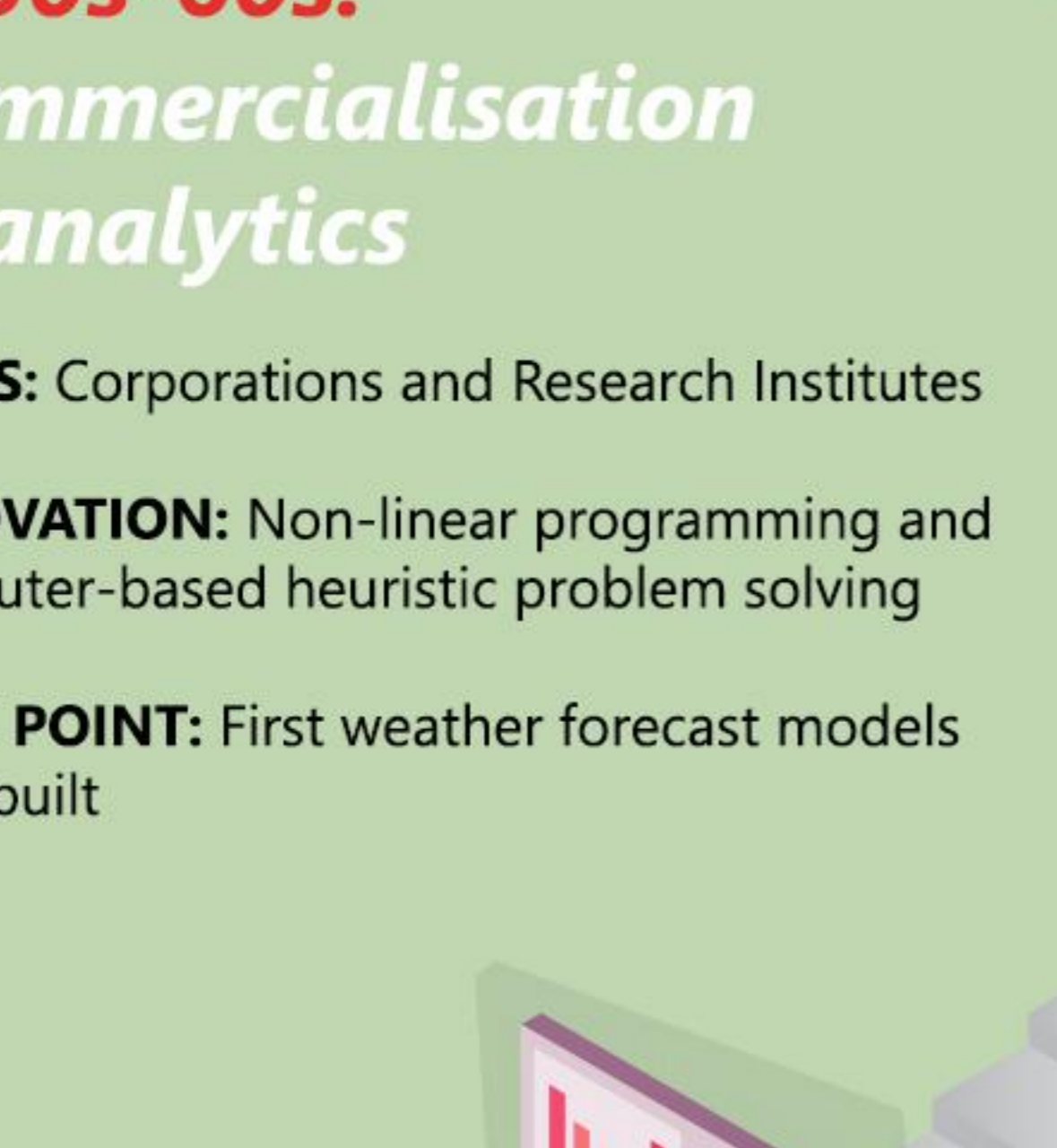
TRACING BACK THE STEPS OF EVOLUTION



01

1930s-40s: Dawn of computer age

USERS: Government Agencies
INNOVATION: Linear programming and computational models for neural networks built
HIGH POINT: Critical use in WWII for decoding enemy messages and predicting nuclear chain reaction behaviour



02

1950s-60s: Commercialisation of analytics

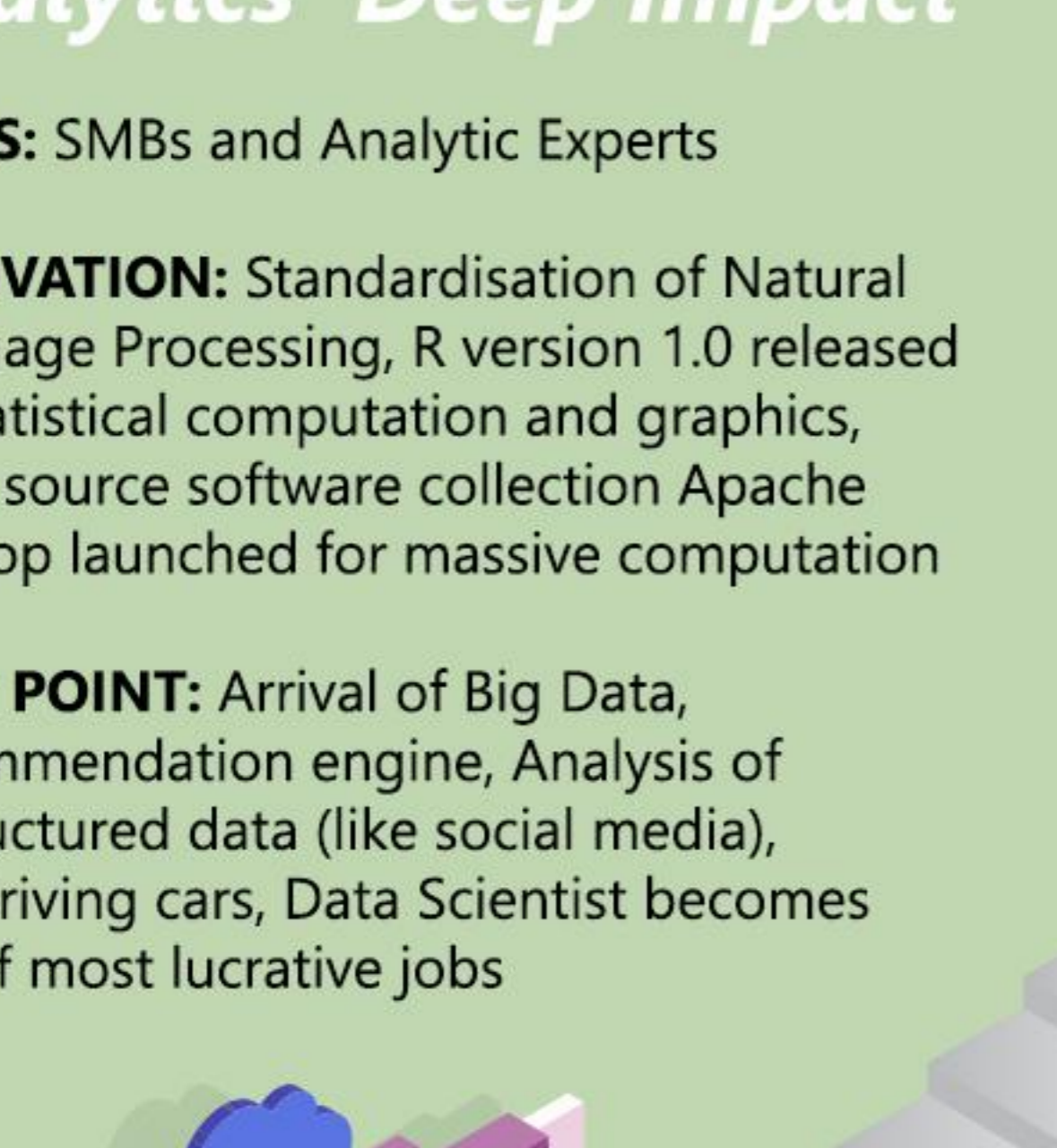
USERS: Corporations and Research Institutes
INNOVATION: Non-linear programming and computer-based heuristic problem solving
HIGH POINT: First weather forecast models were built



03

1970s-90s: Analytics goes mainstream

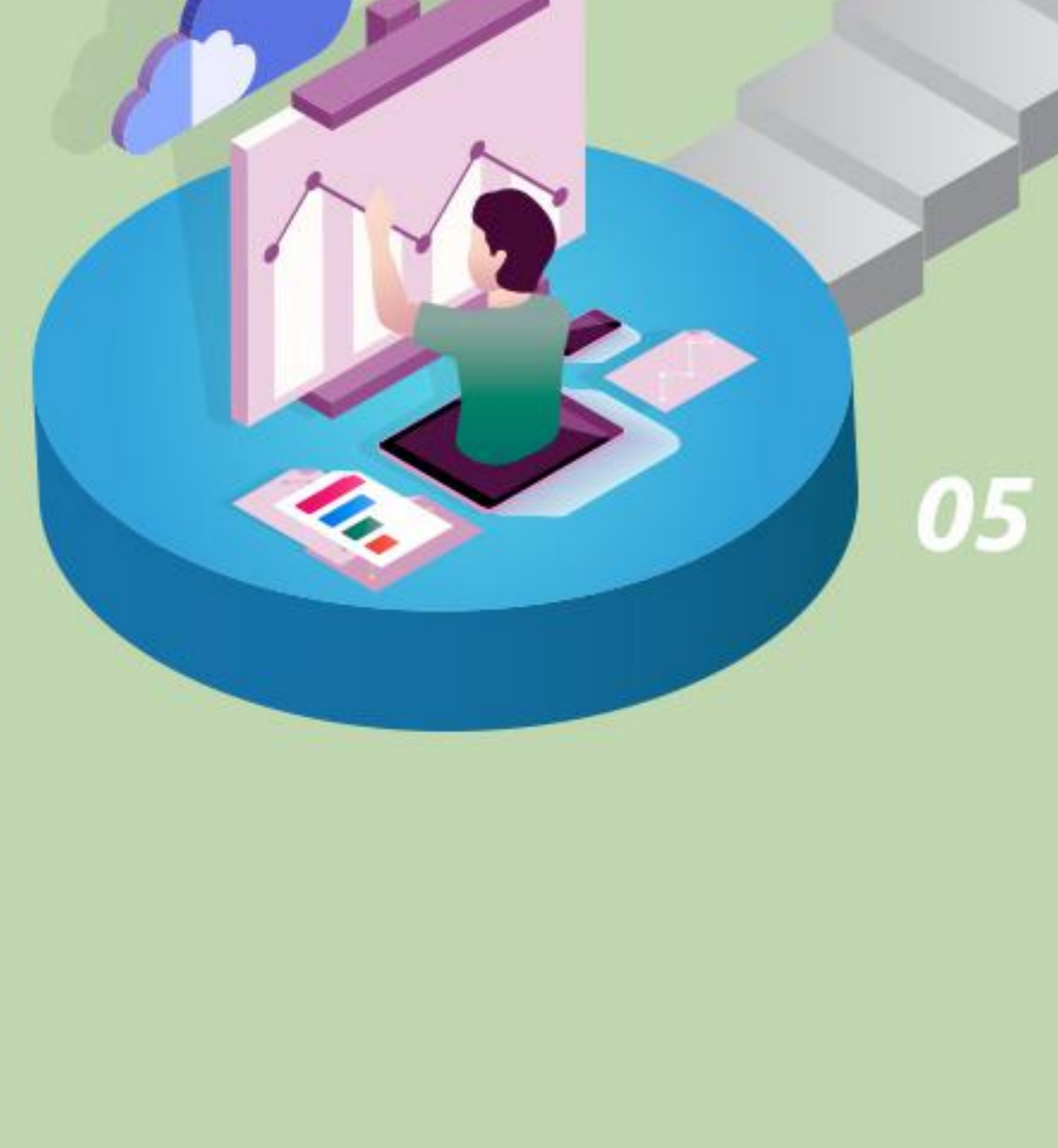
USERS: Mid-Size Business and Tech Start Ups
INNOVATION: Real-time analytics and Prescriptive analytics
HIGH POINT: Amazon and eBay go live while Google applies "Page Rank" algorithms to web searches to maximise results relevance. By late 1990s, there was emergence in the usage of Big Data term in modern context



04

2000-present: Analytics' Deep Impact

USERS: SMBs and Analytic Experts
INNOVATION: Standardisation of Natural Language Processing, R version 1.0 released for statistical computation and graphics, Open source software collection Apache Hadoop launched for massive computation
HIGH POINT: Arrival of Big Data, Recommendation engine, Analysis of unstructured data (like social media), Self-driving cars, Data Scientist becomes one of most lucrative jobs



05

What Next: Ubiquitous Analytics

USERS: Anyone and Everyone
INNOVATION: Analytical exchanges that enable global collaboration, Anticipatory analytics
HIGH POINT: Cloud based analytical exchange, Predictive policing to pre-empt and prevent crimes, cure of rare diseases, anticipatory analytics to make it impossible for cars to crash or dinners to burn, personalised marketing taking over mass campaigns, data licensing trumping over data purchasing

WHAT LIES AHEAD

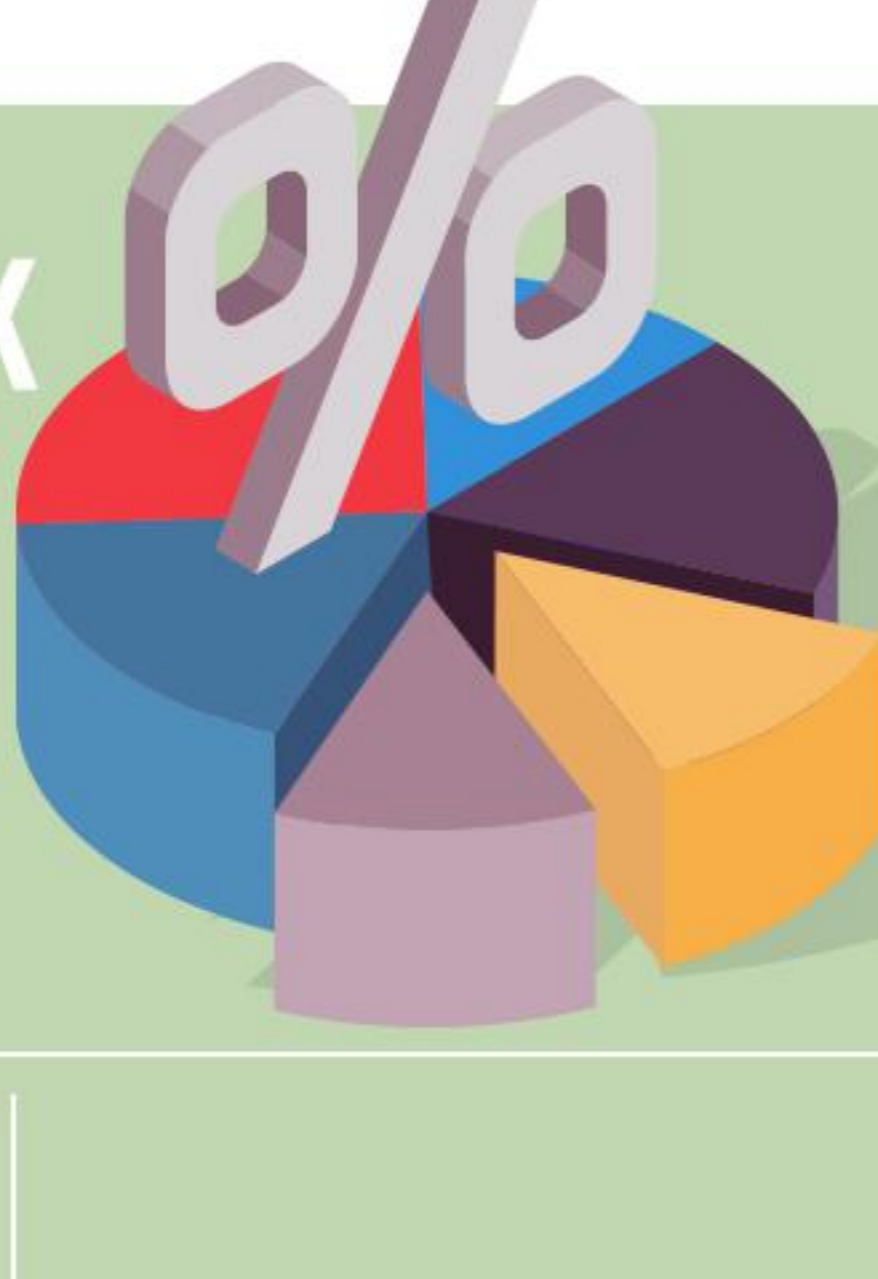


Contextual insights will be delivered in the moment	Insight-as-a-service will rise	End-to-end cloud analytics will emerge
More users will demand embedded self-service analytics	Embedded analytics will be the standard	Domain and language agnostic analytics will see a rise
Human-Machine interaction will get majorly simplified	Input inlet for analytics will go beyond 5 human senses	Analytics leverage for enhancing data security will see a rise

Global market for data analytics will surpass a valuation of **USD 77.64 BILLION** by 2023.¹

Advanced Analytics market will be worth **USD 29.53 BILLION** by 2019.²

NUMBERS SPEAK THE TRUTH



By 2020, **50%** of IT organizations will apply advanced analytics in application development to improve the quality and speed of delivery.³

By 2019, natural-language generation will be a standard feature of **90%** of modern BI and analytics platforms.³

50% of analytics queries will be generated using search, natural-language query or voice, or will be autogenerated by 2019.³

By 2020, predictive and prescriptive analytics will attract **40%** of enterprises' net new investment in BI and analytics.⁴

By 2018, **50%** of agent interactions will be influenced by real-time analytics.³

The demand for advanced analysts and data scientists will grow by **28%** by the year 2020.^{5 & 6}

By 2020, more than **40%** of all data analytics projects will relate to an aspect of customer experience.³

By 2020, **25%** of organizations using a sales performance management (SPM) solution will leverage advanced analytics for optimizing their sales compensation plans.³

Around **29 BILLION** connected devices are forecasted by 2022, of which around 18 billion will be related to IoT – input inlets for analytics.⁷

By 2020, leading chip vendors will have reduced their design project delays by over **40%** leveraging advanced-analytics tools.³

Reference Links:

- <https://www.marketresearchfuture.com/reports/data-analytics-market-1689>
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