

Dr. John Kelly III

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NOAA Science Advisory Board

November 18, 2016



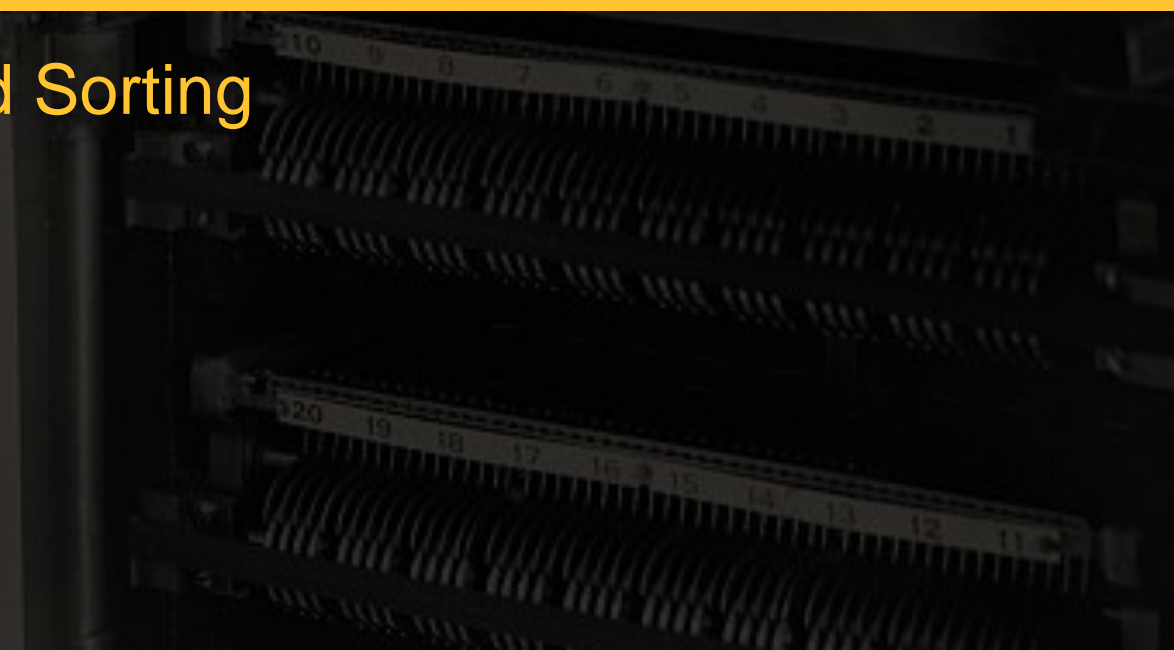


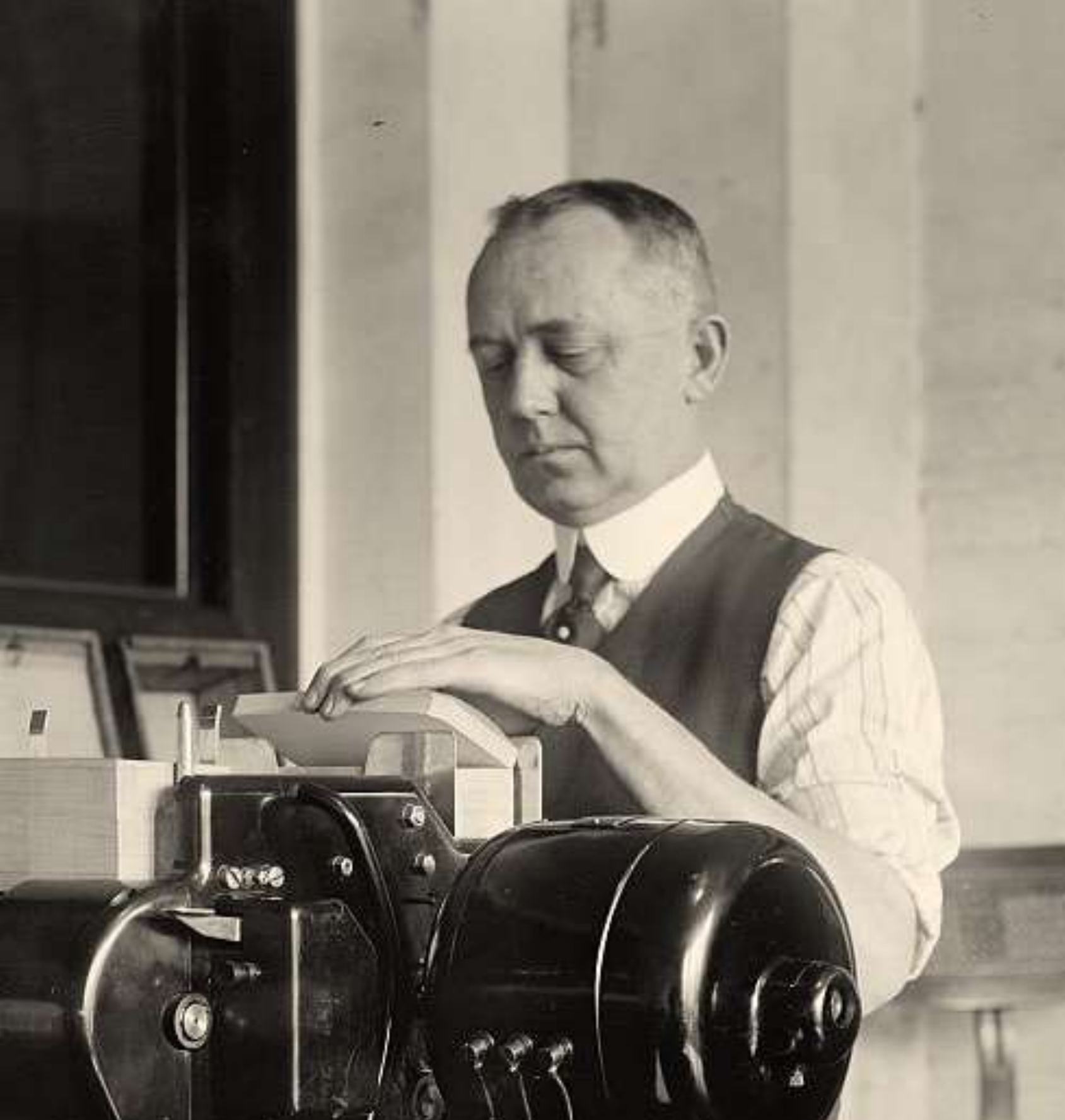
Tabulating Systems Era

1900 – 1940s

Counting and Sorting

- Sales
- Inventory
- Customers





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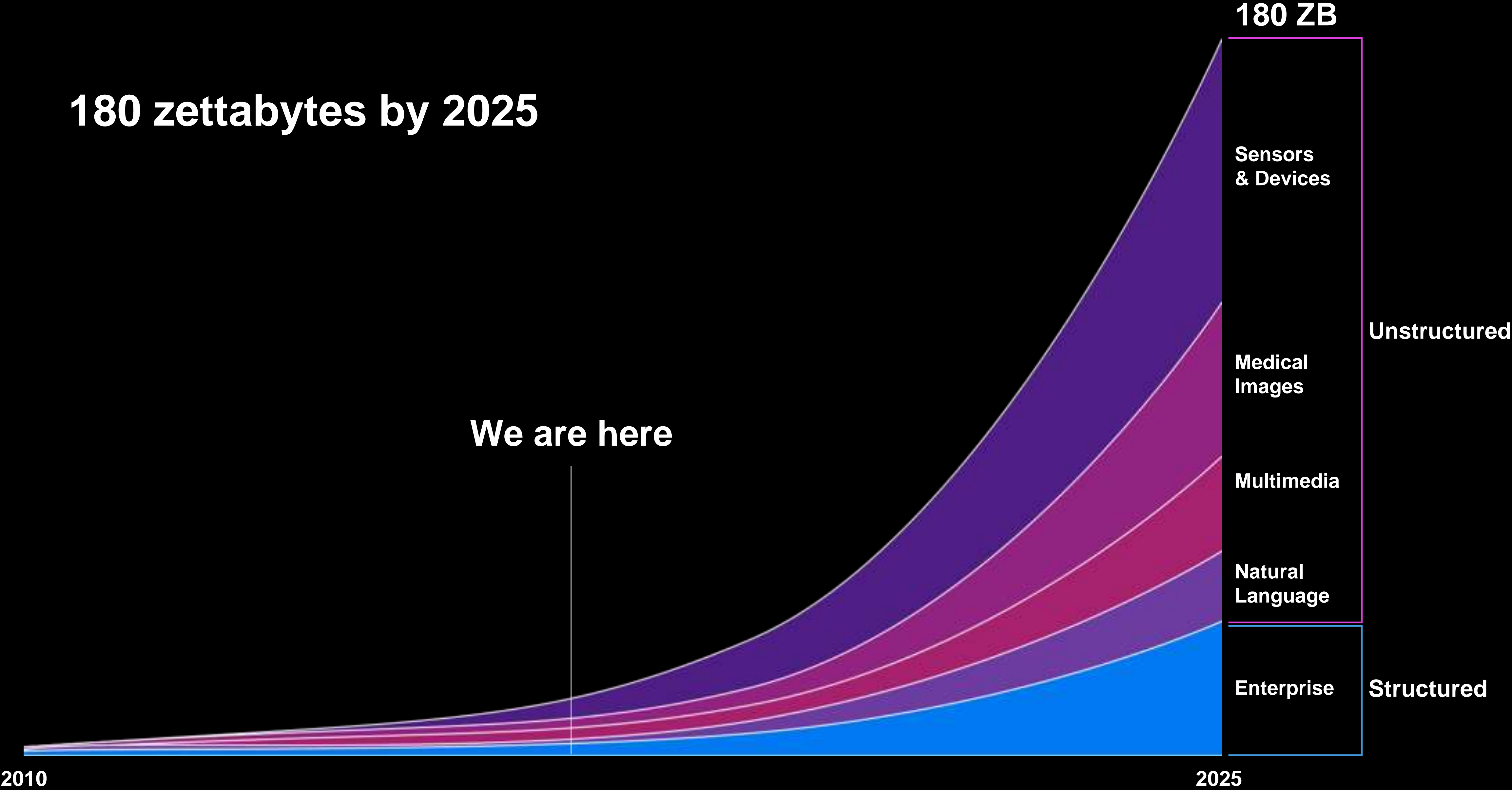
Programmable Systems Era

1950s – Present

Back-Office Transformation

- Accounting and Transactions
- Asset Management
- Pervasive Mobile Apps

180 zettabytes by 2025



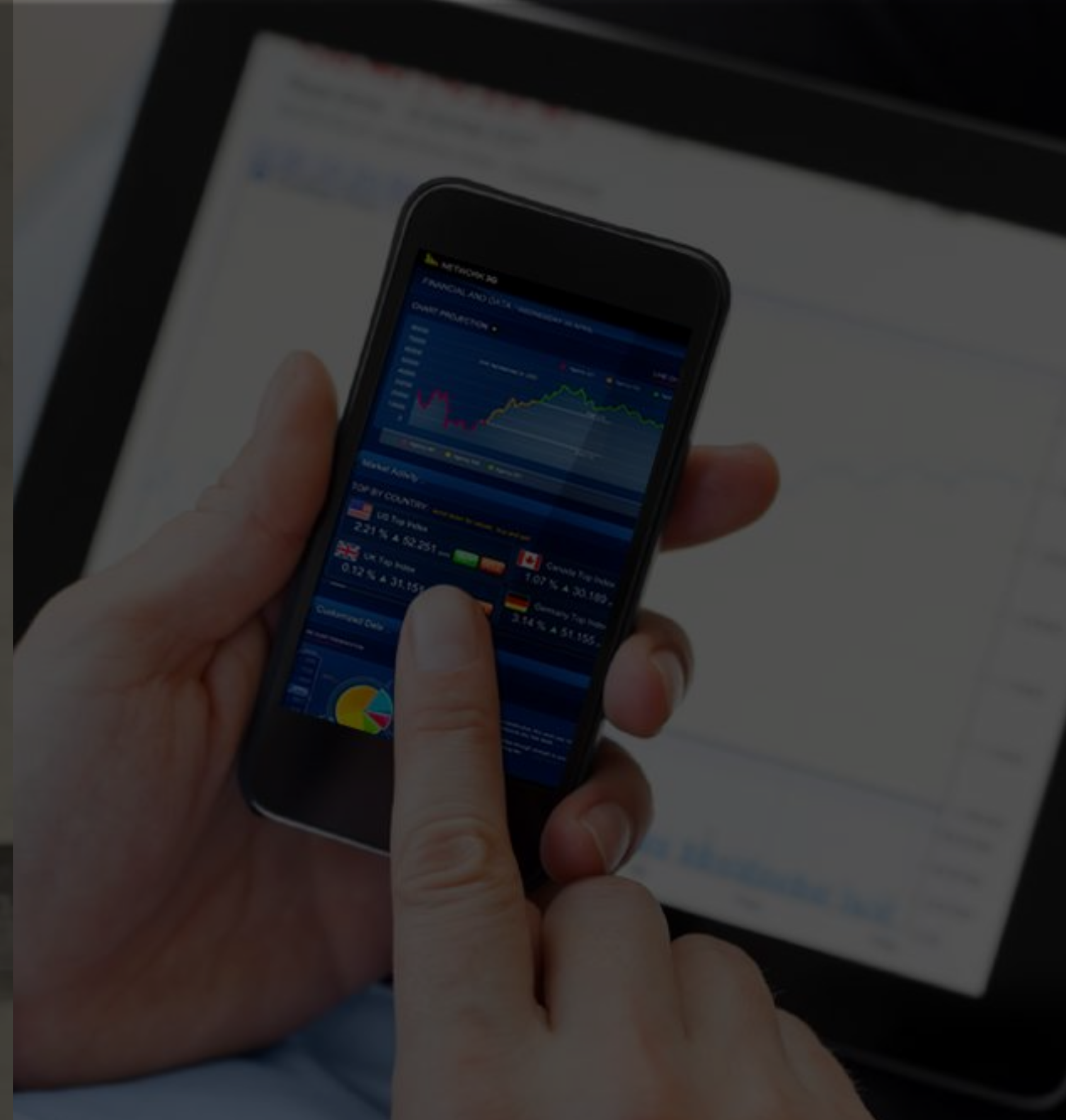


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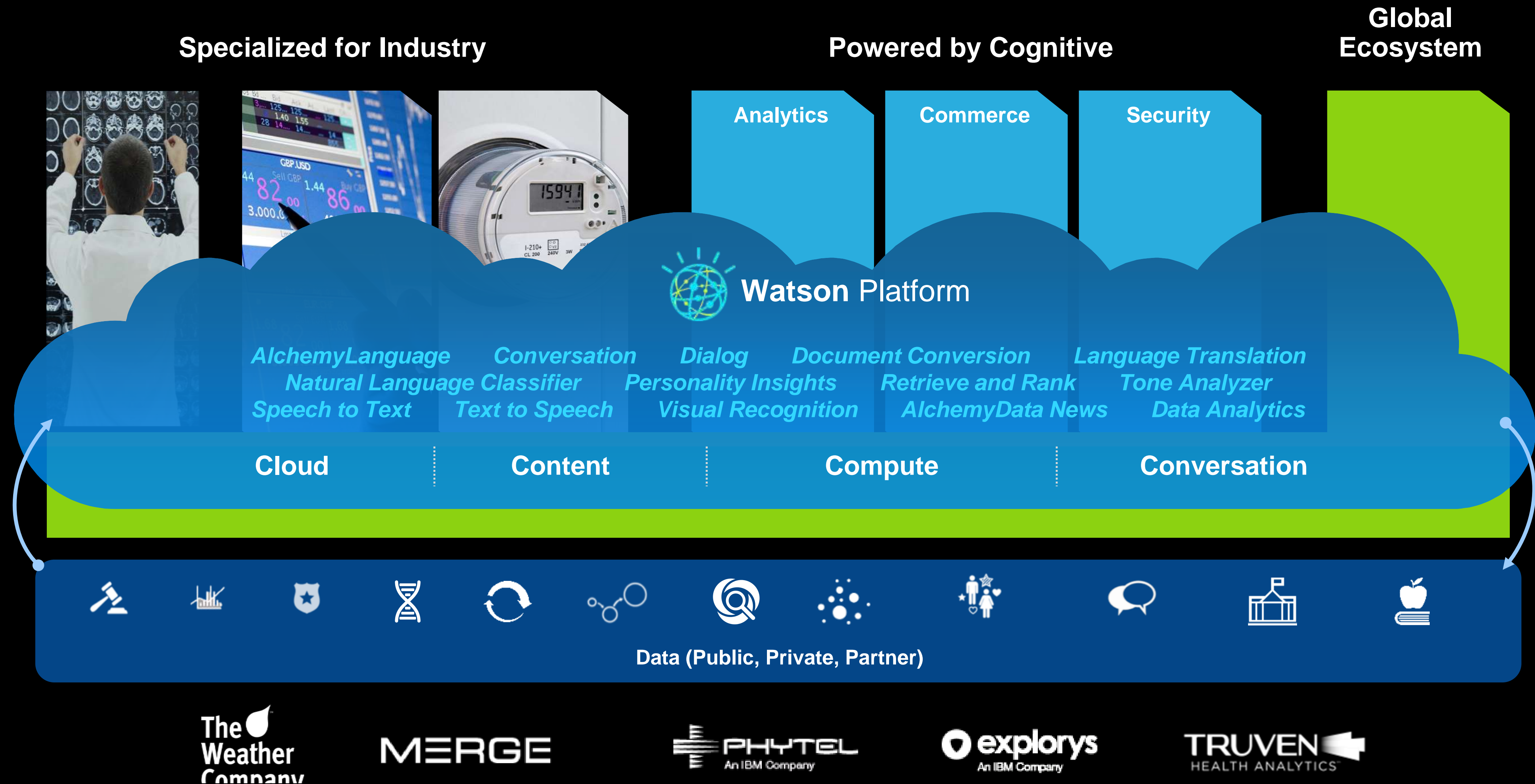
Cognitive Computing Era

2011 –

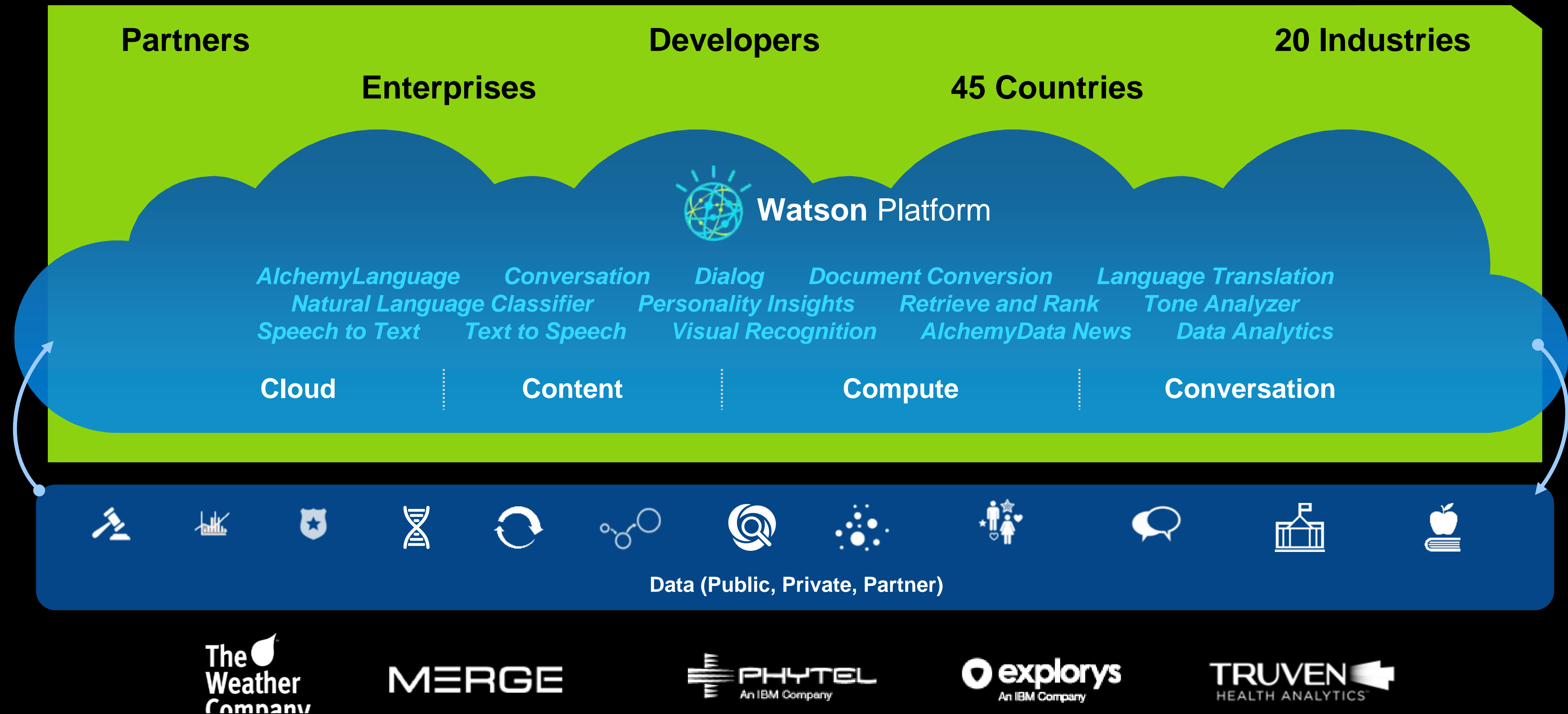
Augmenting Human Intelligence

- Learn at scale
- Reason with purpose
- Interact with humans naturally

A new business model



Building out a global ecosystem



Watson for Genomics Early Adopters and Partners



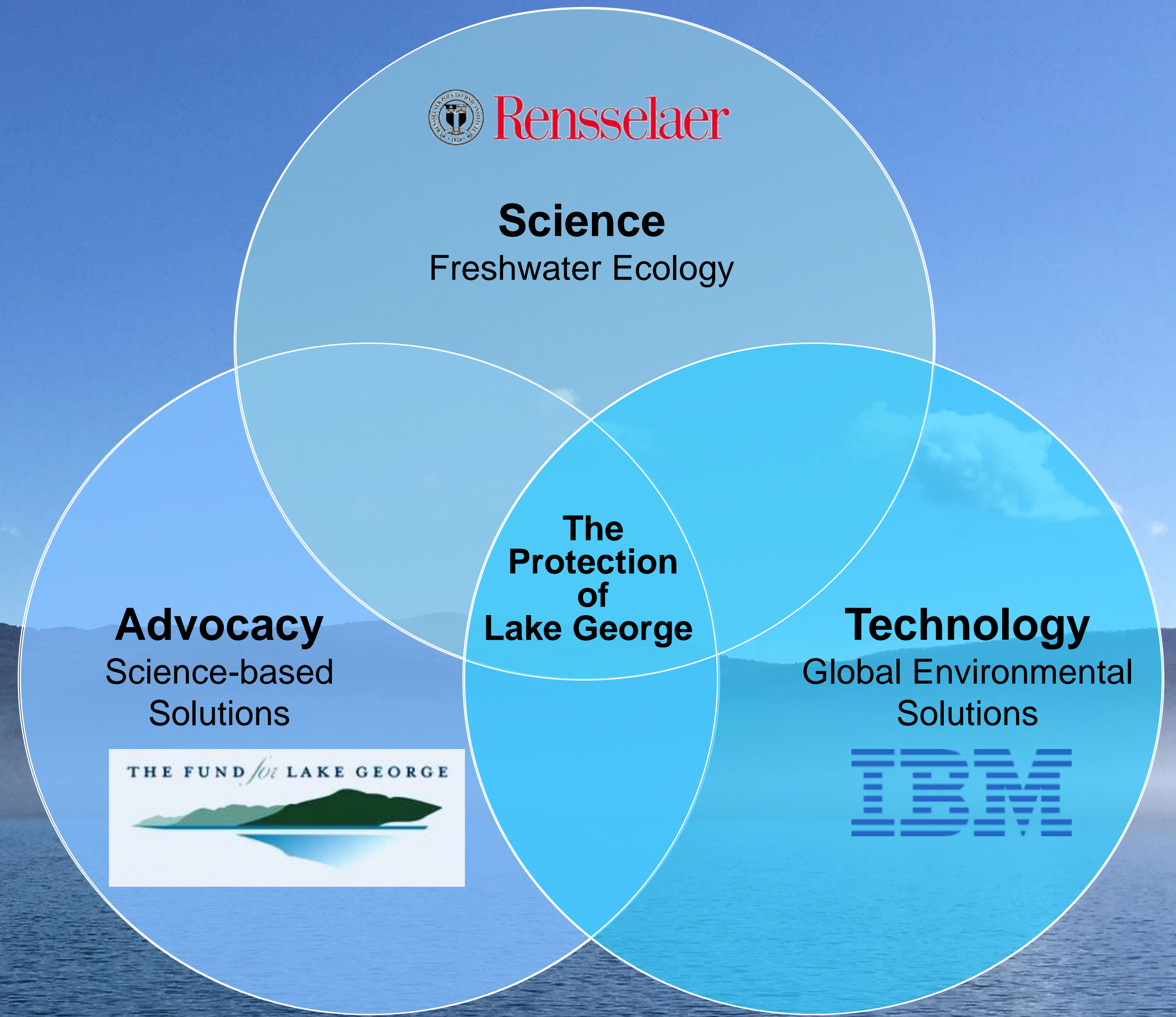
Keck School of Medicine of USC



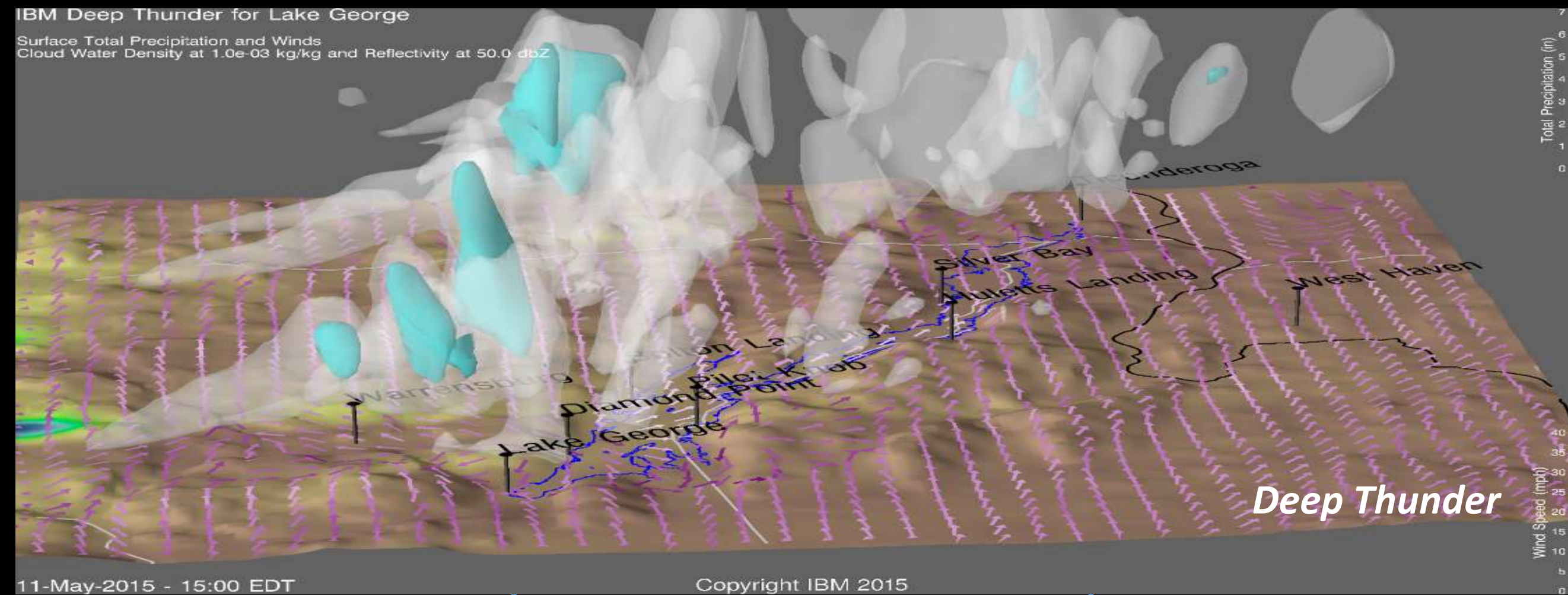
IBM Watson Genomics from Quest Diagnostics®



The Jefferson Project



Atmosphere

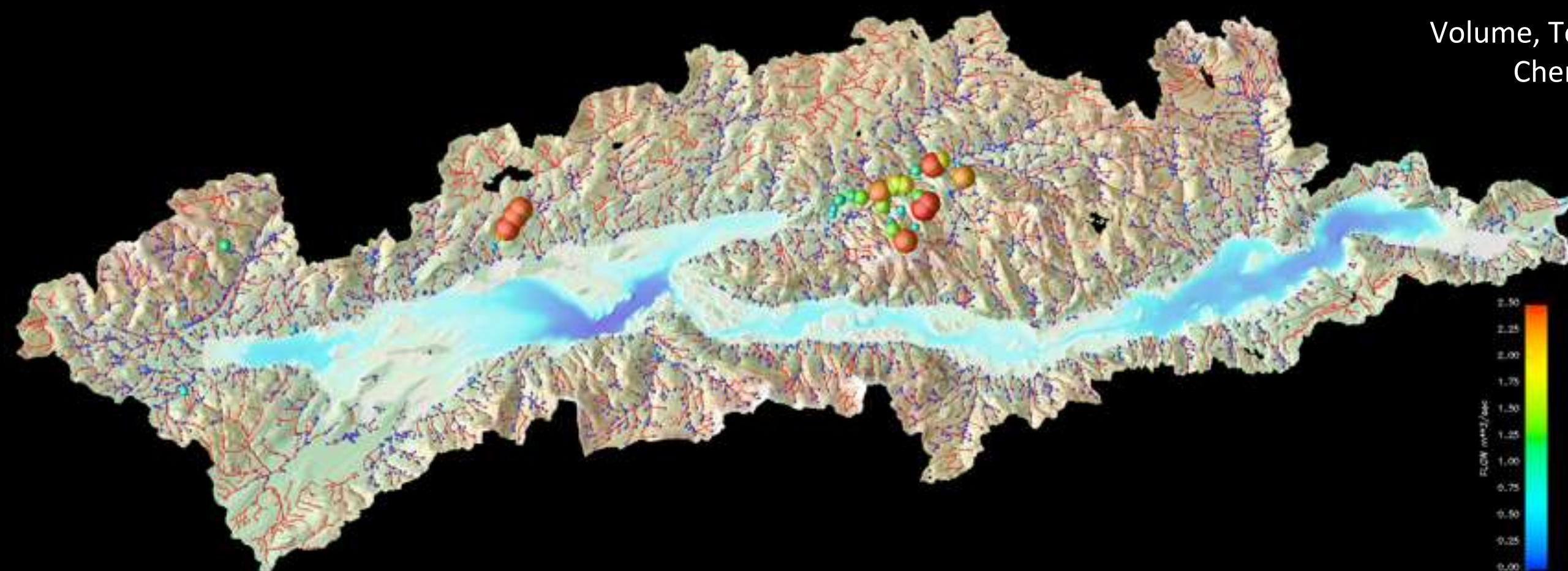


Precipitation,
Snow melt,
Temperature

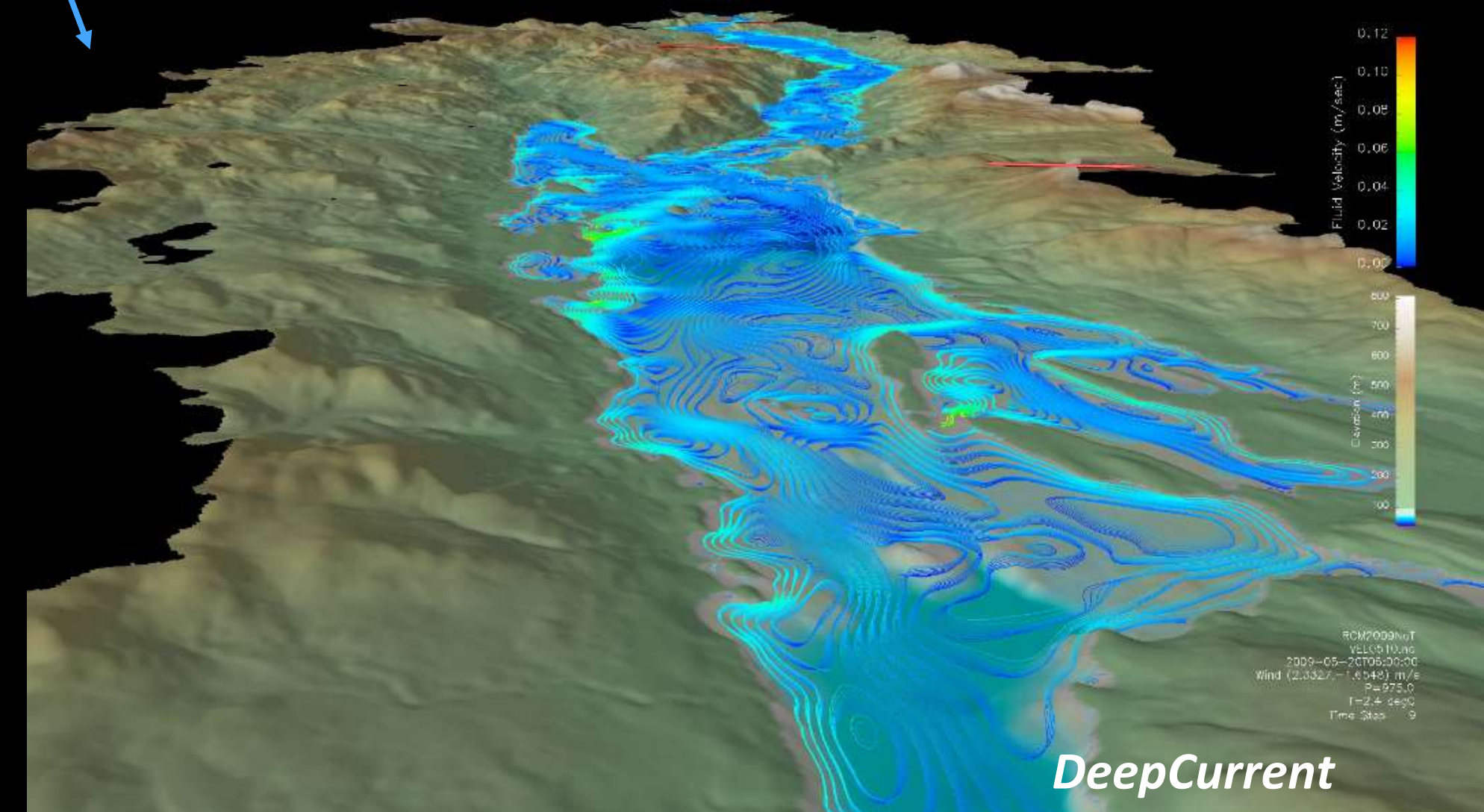
Food Web

Volume, Temperature,
Chemistry

Wind, Radiation,
Precipitation, Temperature



Runoff



Circulation

2015/10/23 00:00:00Z

N/S Slice 120, E/W Slice 340
Vertical Exag. 20.00
95% of depth

Air Temp 286.45 (K @ 273.15)
Wind Speed (7.23, -0.93) (m/s)

Water
Temperature

Stream Flow

Wind

Current
Velocity



The Jefferson Project
at Lake George

Streamflow size is flow rate
Streamflow color is Temperature

Temperature Contours .5 degK from 280 to 300

Velocity Contours .01 m/s from -1 to .1

