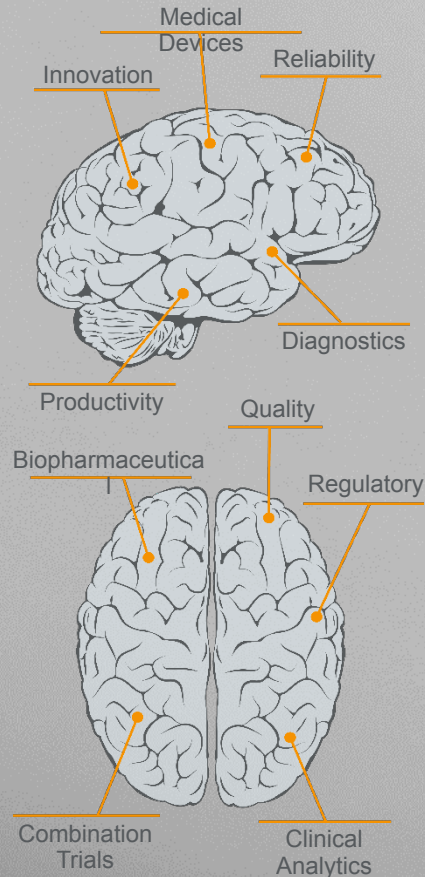




Project Metrics & Dashboards

05 August 2014

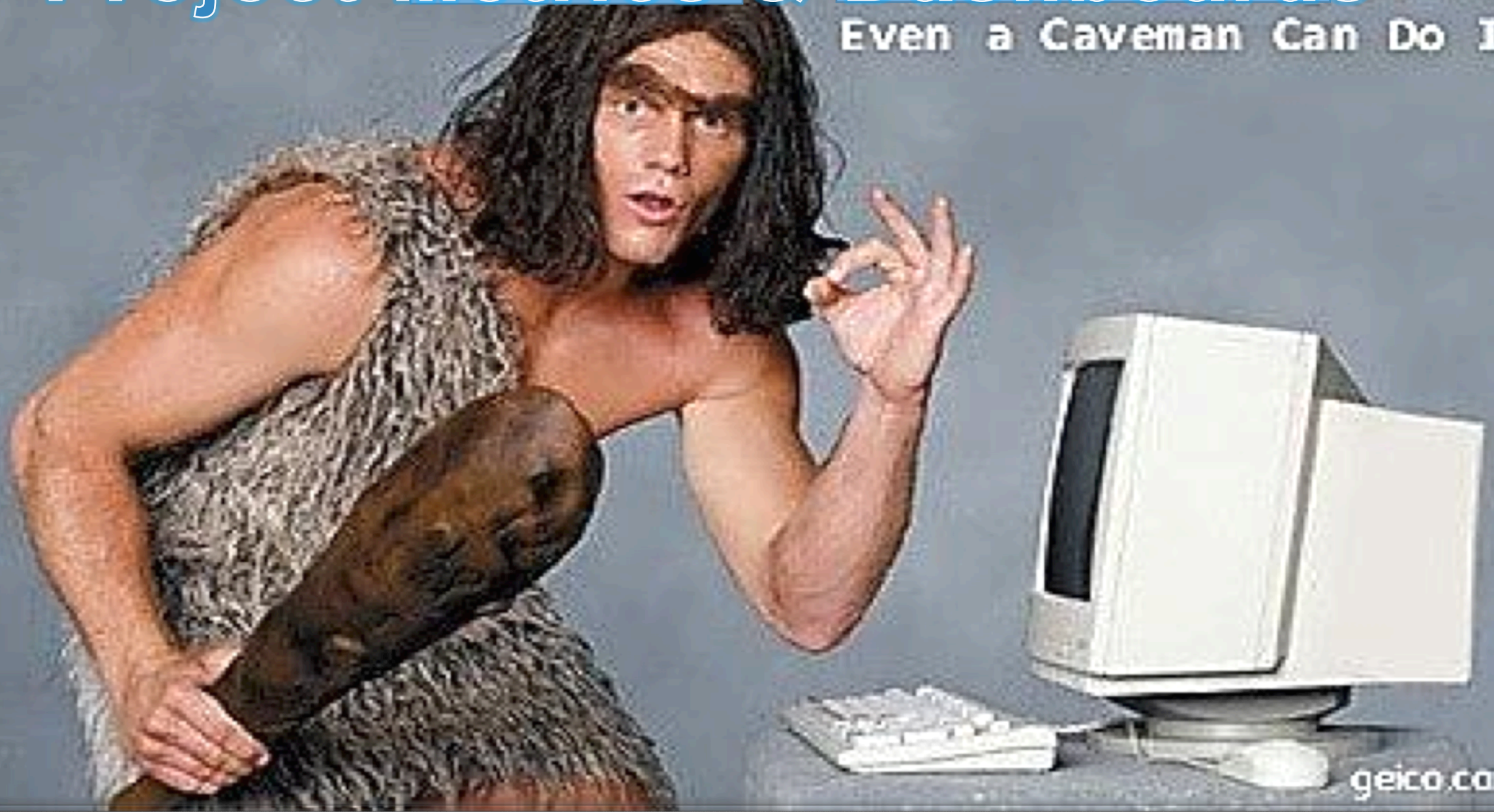
Think



- Technology Evolution
- Enterprise Technology – the Last 64 Years
- Project Metrics & Dashboards Macro Evolution
- Data Review Tools (DRT)
- Use Cases for DRT
- Assurance of Supply
 - The Data Loop
 - Decision Trees Usage/Inclusions
- Current Trends – BI/Analytics/Inclusions
- Example Displays
- The “MAAP” Approach

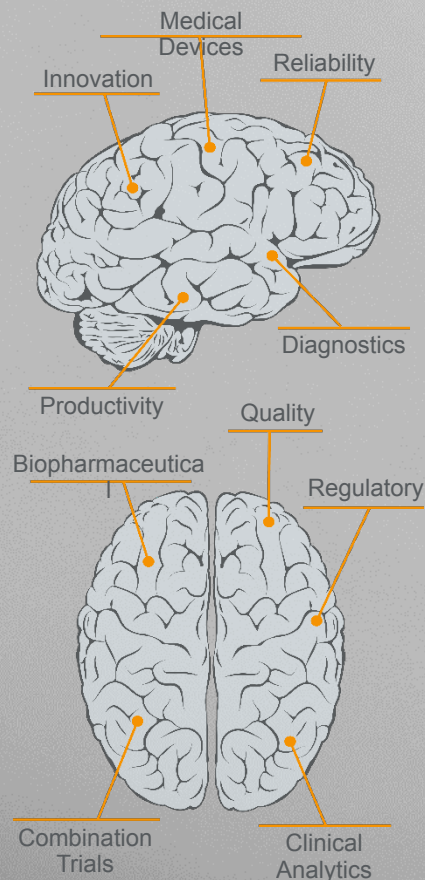
Project Metrics & Dashboards

So Easy
Even a Caveman Can Do It!

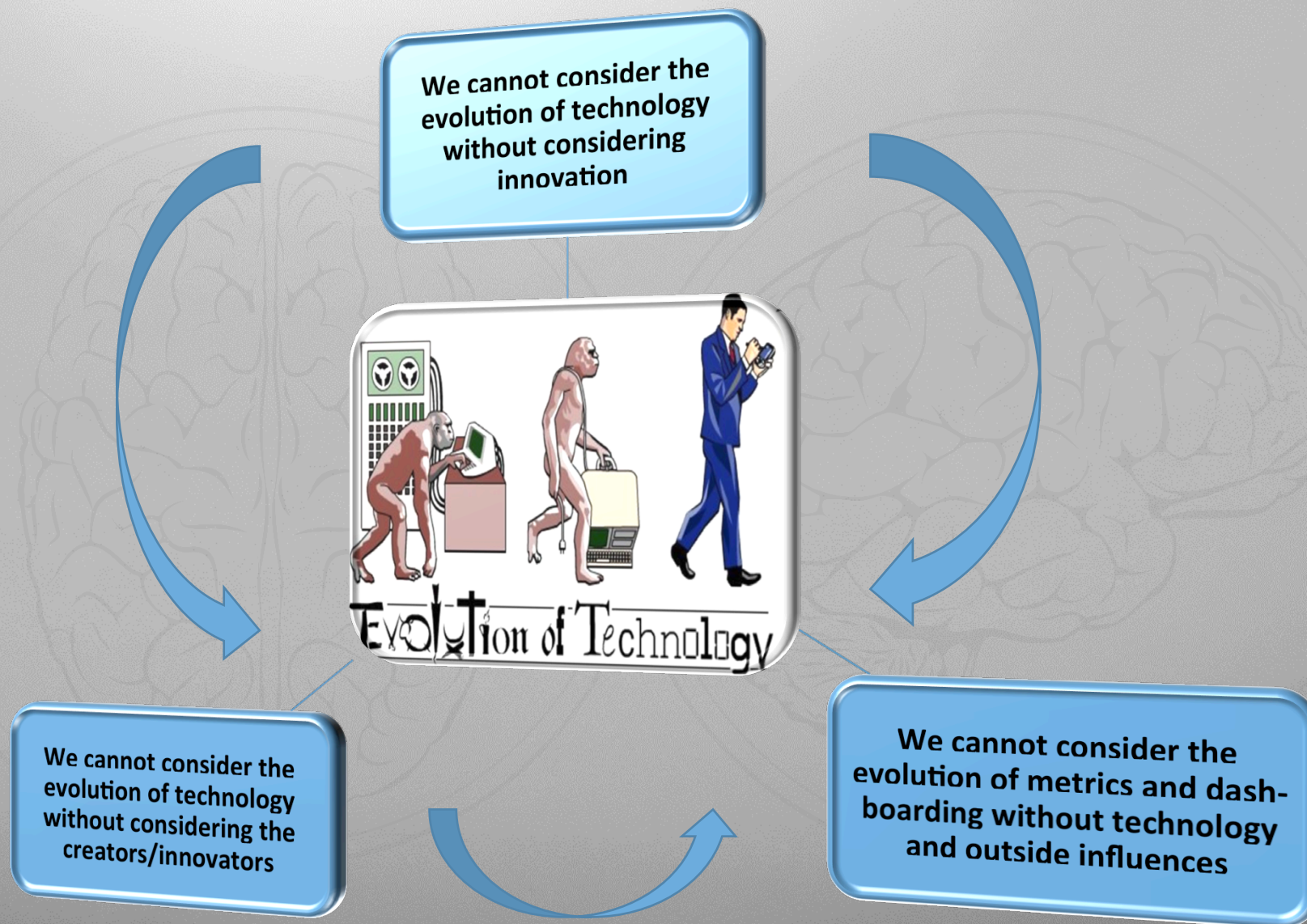


PROJECT METRICS & DASHBOARDS – TECHNOLOGY EVOLUTION

Think



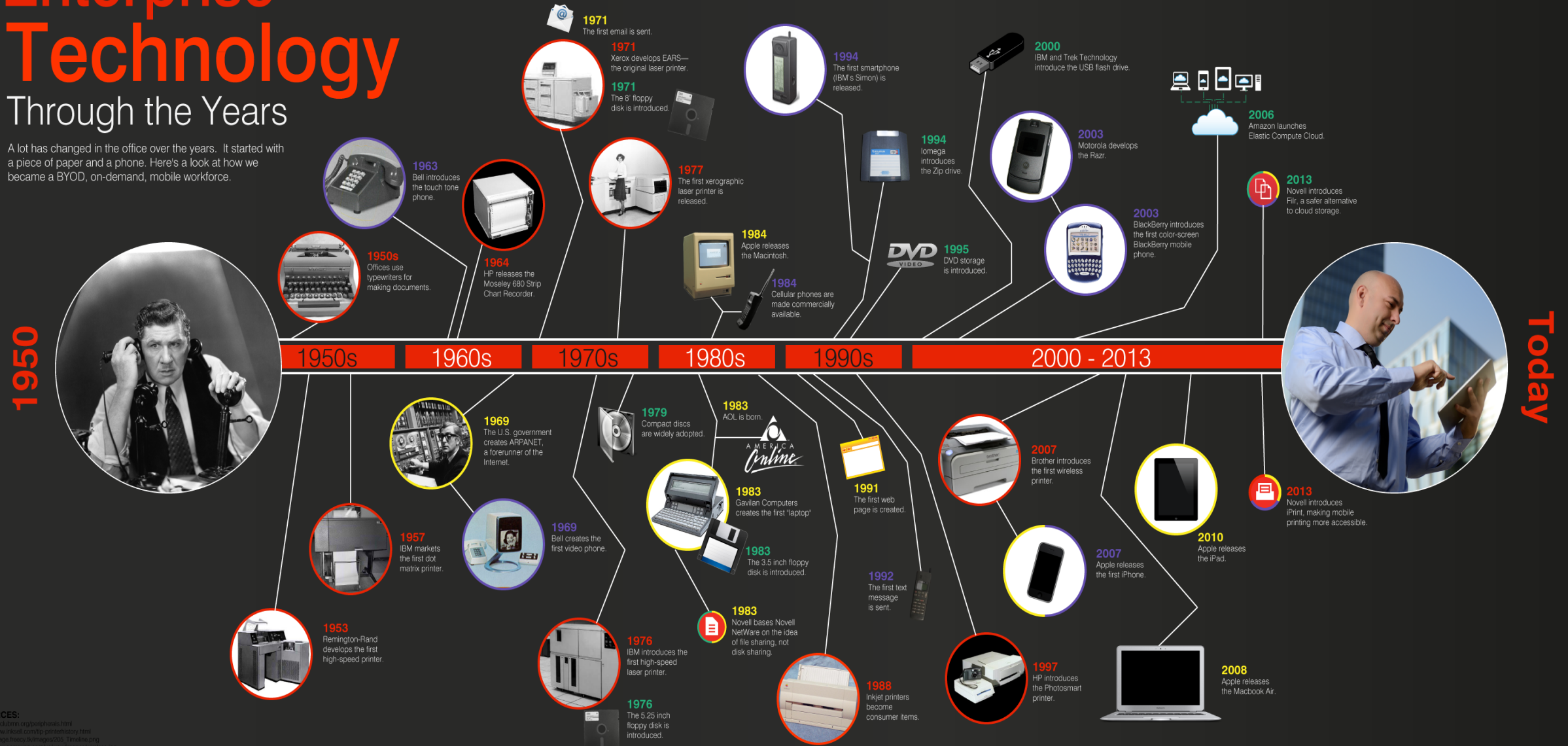
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Through the Years

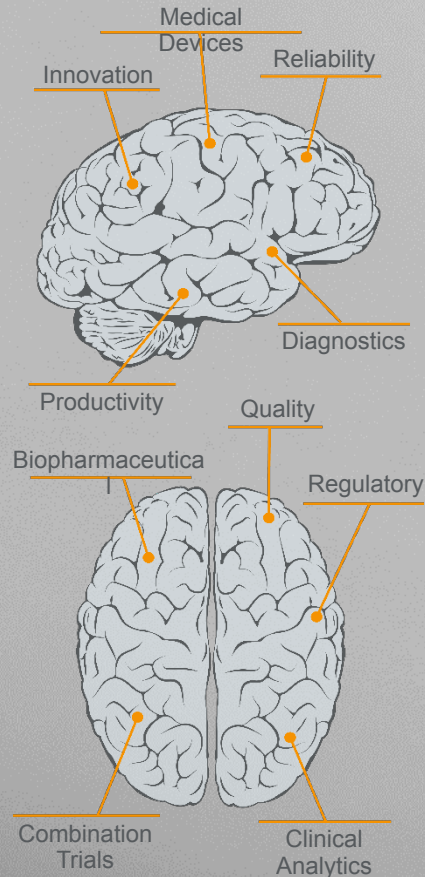
A lot has changed in the office over the years. It started with a piece of paper and a phone. Here's a look at how we became a BYOD, on-demand, mobile workforce.

Printers Phones Storage Computers



PROJECT METRICS & DASHBOARDS MACRO EVOLUTION

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Reliance on
Service
Provider for
Data Provision

Self-Service
Discovery with
Details on Demand

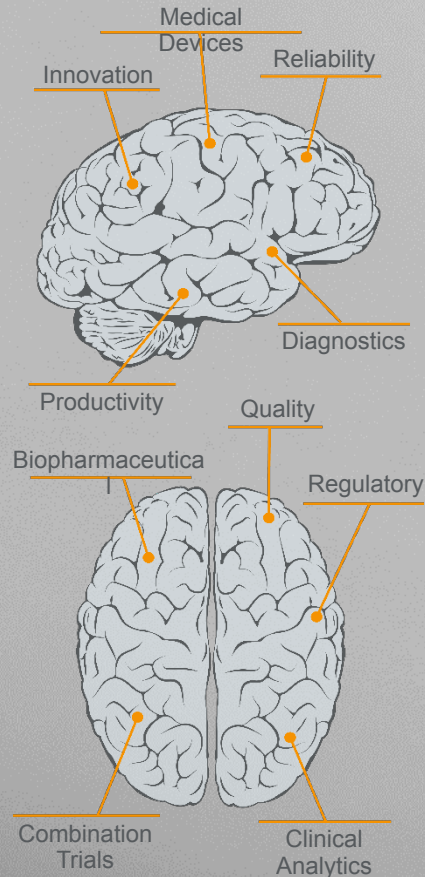


- Fastest to Actionable Insight
- Visibility into the Unknown
- User Adaptability

BI and analytics platforms will remain one of the fastest-growing software markets according to Gartner with an expected compound annual growth rate of 7% through 2017

PROJECT METRICS & DASHBOARDS - TWO KEY ELEMENTS

Think



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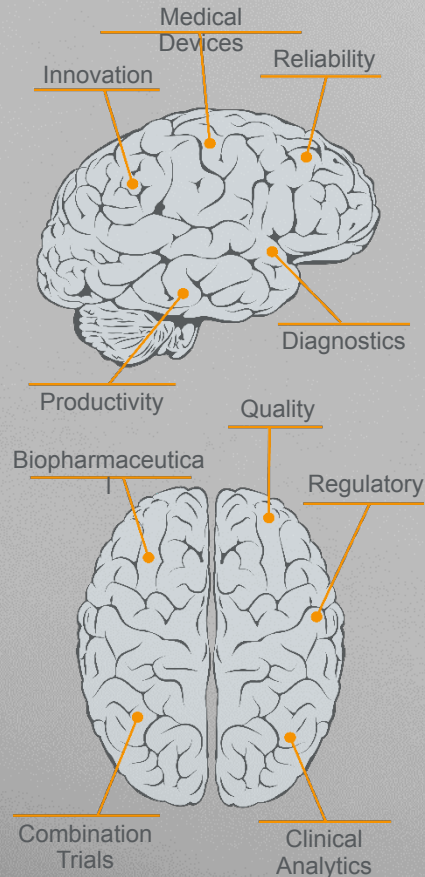
Visibility -

Visibility is the result of transparent behavior. If I have visibility, then I know what to expect in the future.

Transparency

Transparency is a behavior that a team member exhibits. Leadership and stakeholders have full awareness of the team's effort and progress because of the transparency provided by the team members.

Think



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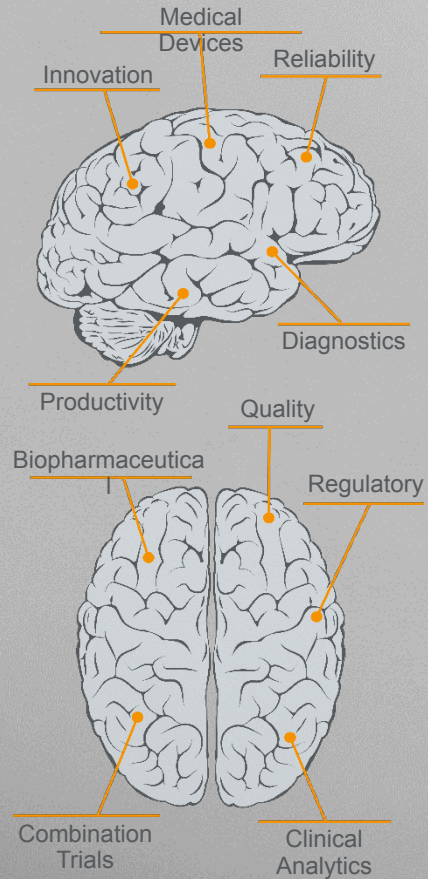
PROJECT METRICS & DASHBOARDS – DATA REVIEW TOOLS

- Integration of data sources
- Metadata management
- Development tools
- Collaboration capabilities
- Reporting
- Dashboards
- Adhoc querying
- Sharepoint integration
- Search based BI
- Mobile BI
- OLAP – slicing, dicing and drilling
- Interactive visualization
- Predictive modeling and data mining
- Scorecards
- Prescriptive modeling, simulation and optimization
- Dynamic data content – these visualizations, linked to databases, update as the data changes (unlike static reports for example)
- Visual querying – ability to query and re-query data simply by manipulating visual portions of graphs or charts or by using drop down lists, push buttons, tabs etc.
- Business actionable alerts
- Role based security
- Cockpit gauges
- Make sure it meshes with existing technical architecture

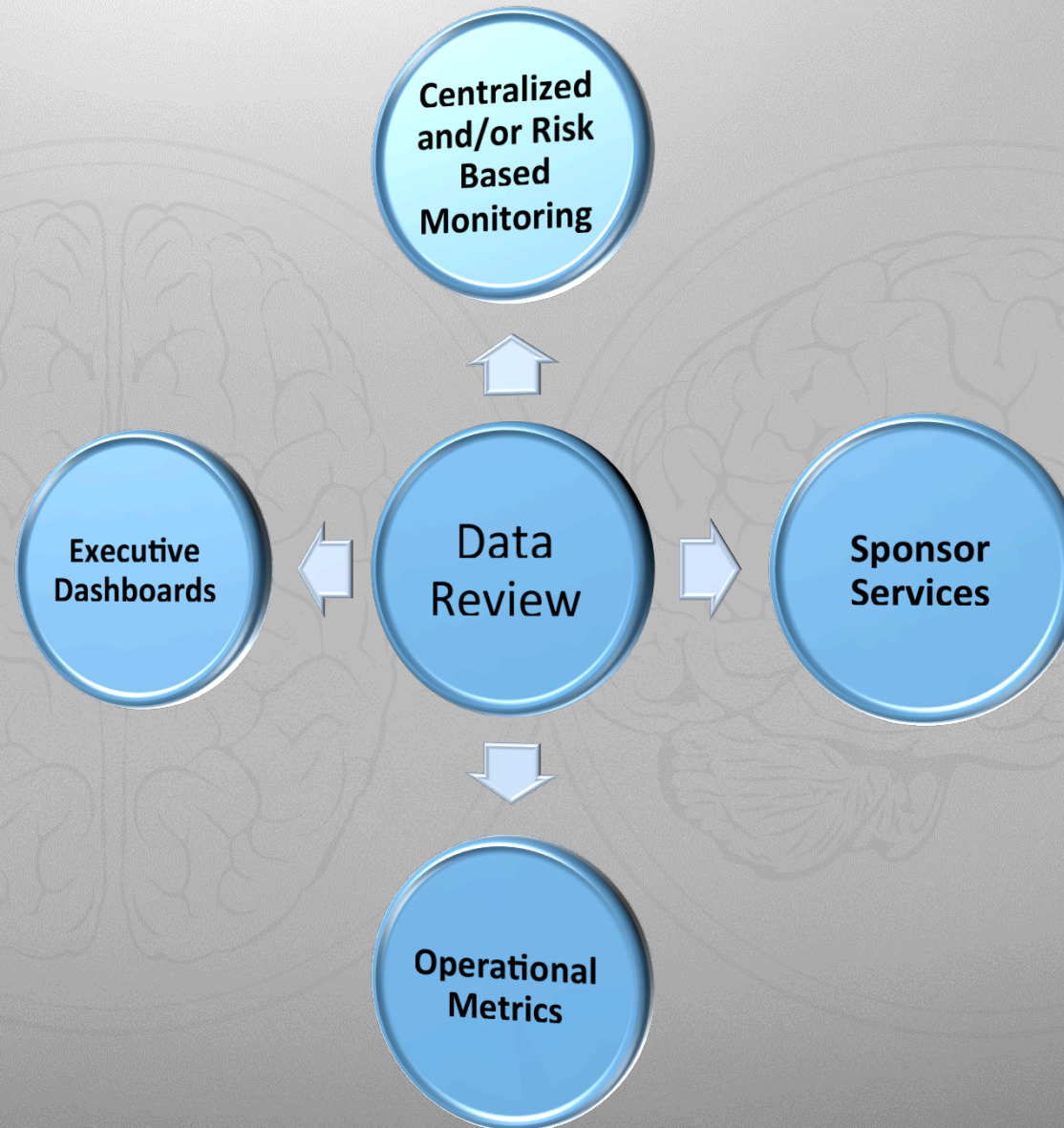
From Gartner and Forrester Reports

PROJECT METRICS & DASHBOARDS – USE CASES FOR DATA REVIEW TOOLS

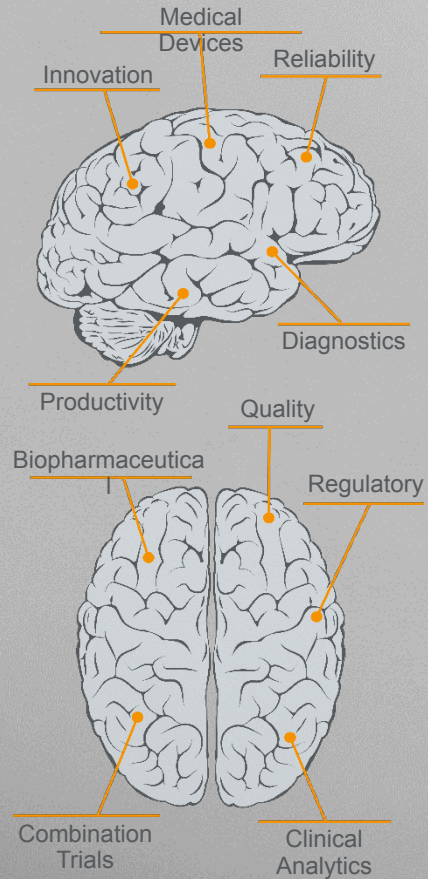
Think



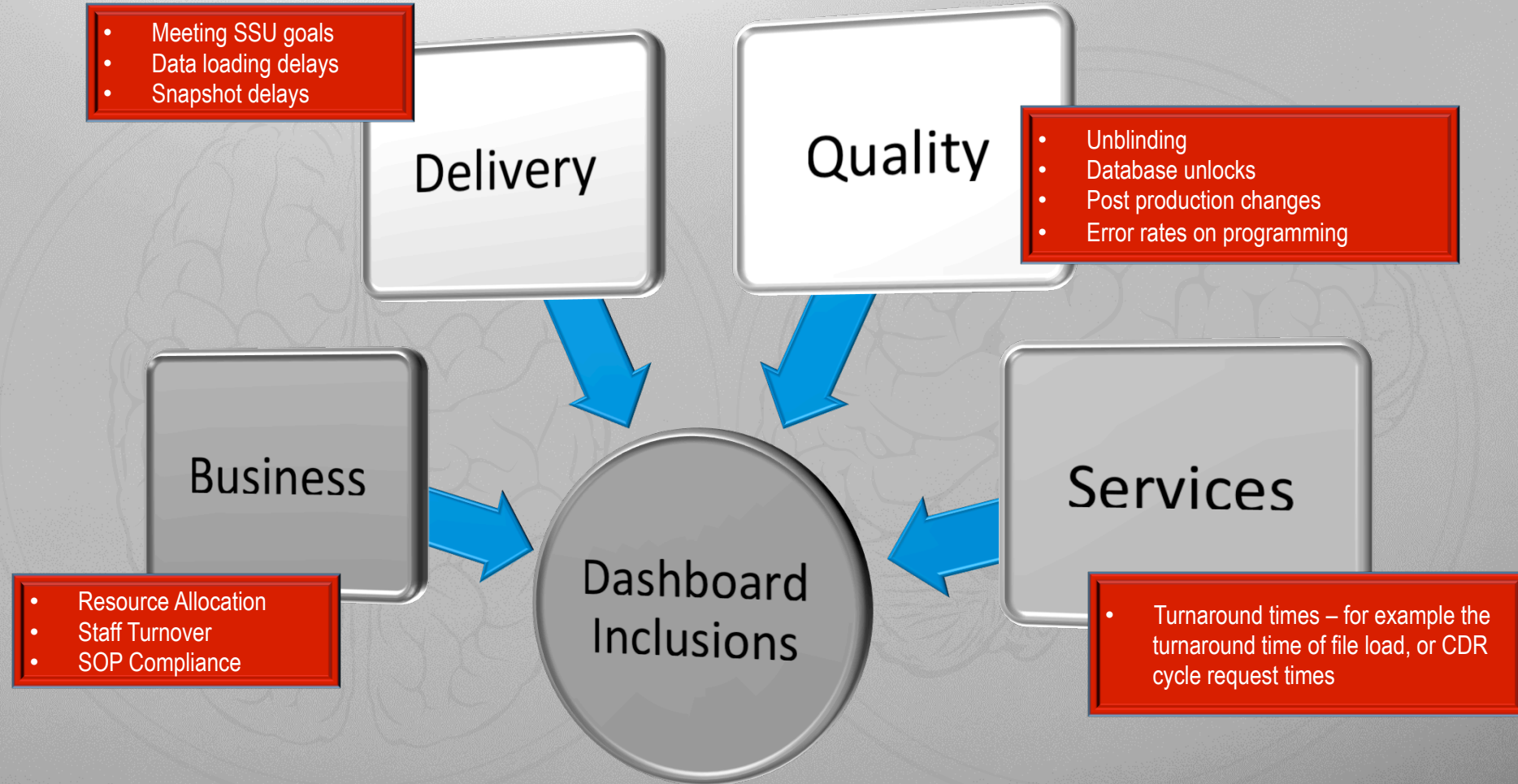
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Think



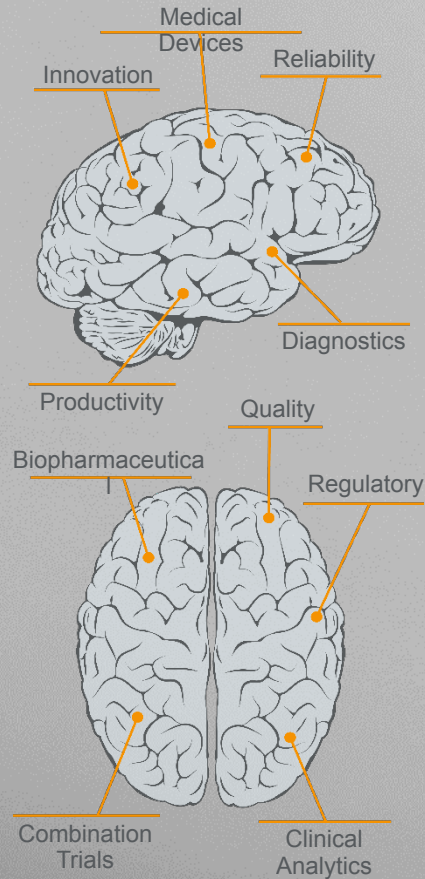
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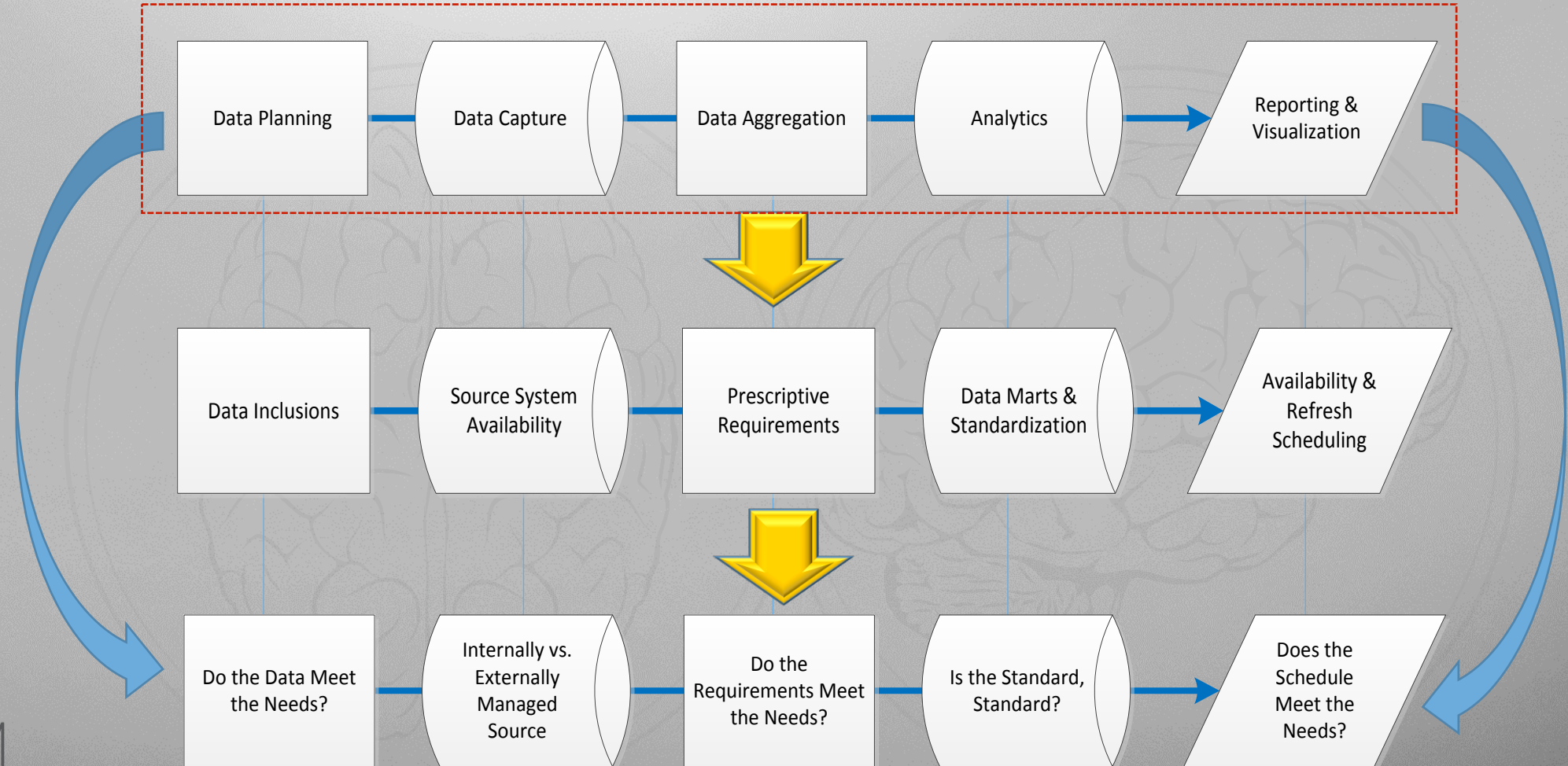
The "X" in KXIs can be substituted for Q=Quality, P=Performance, R=Risk

PROJECT METRICS & DASHBOARDS - THE DATA LOOP

Think

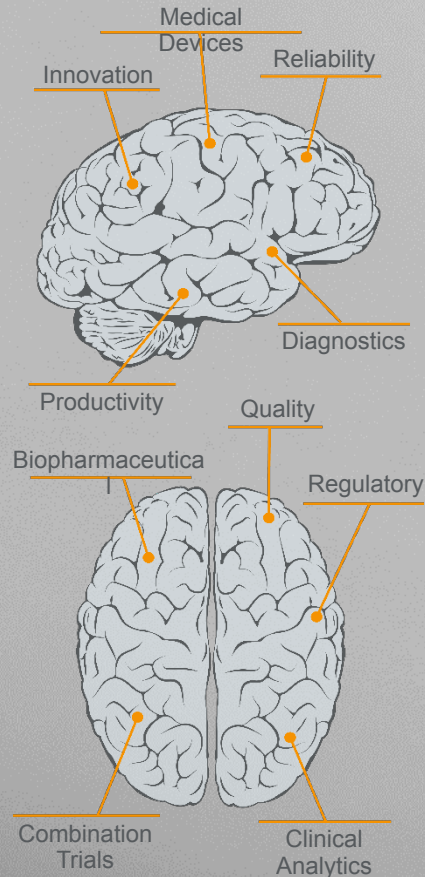


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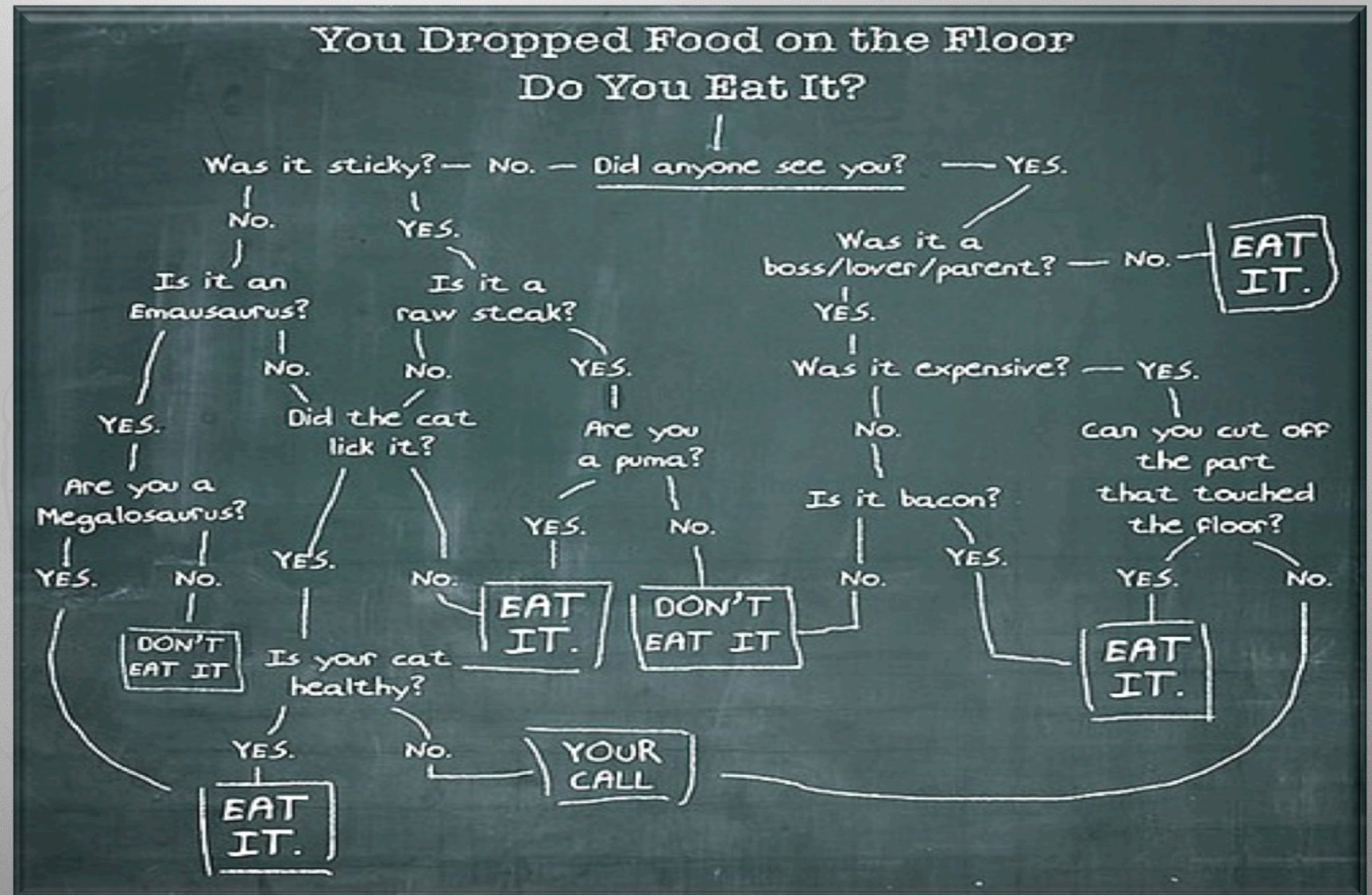


PROJECT METRICS & DASHBOARDS - THE DECISION TREE

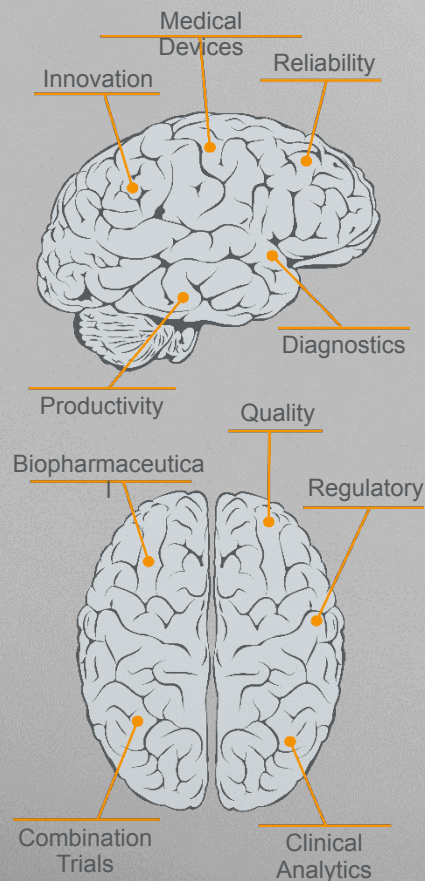
Think



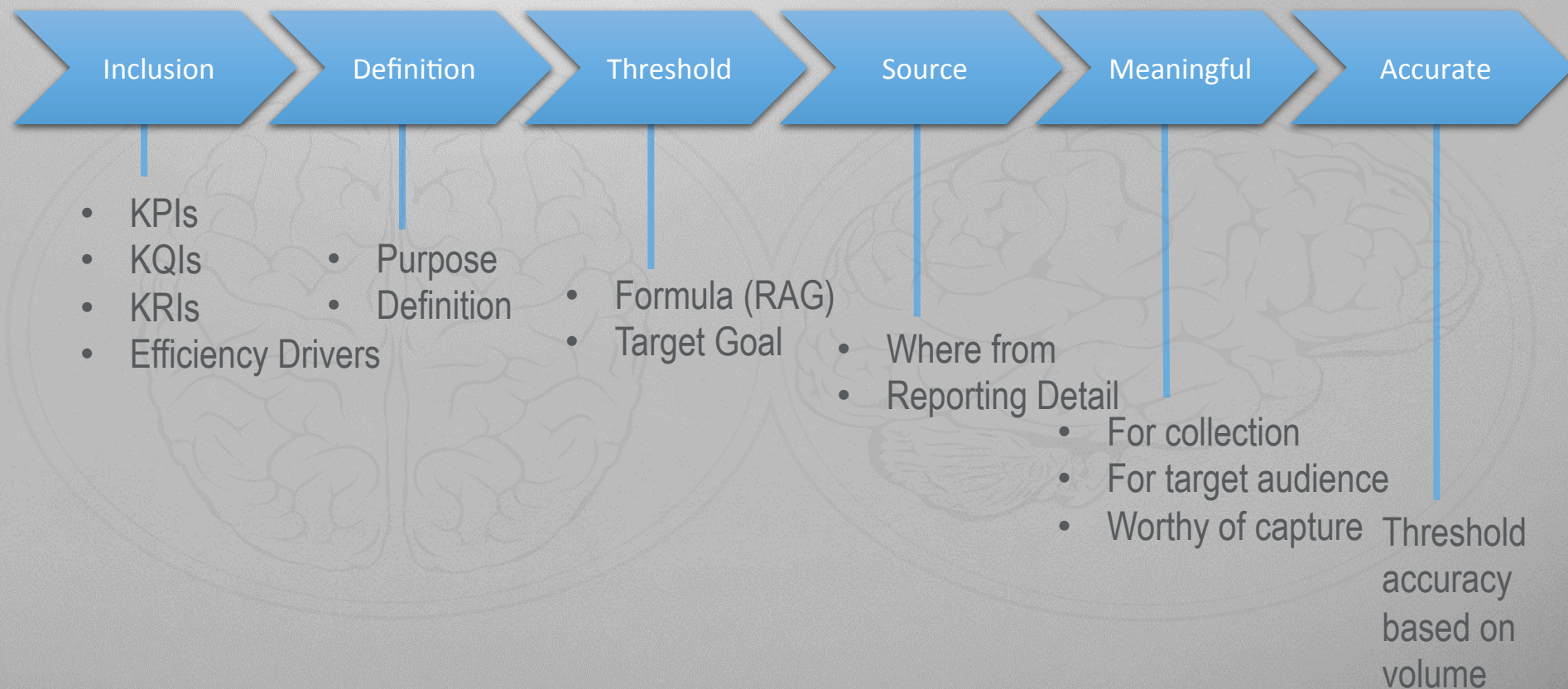
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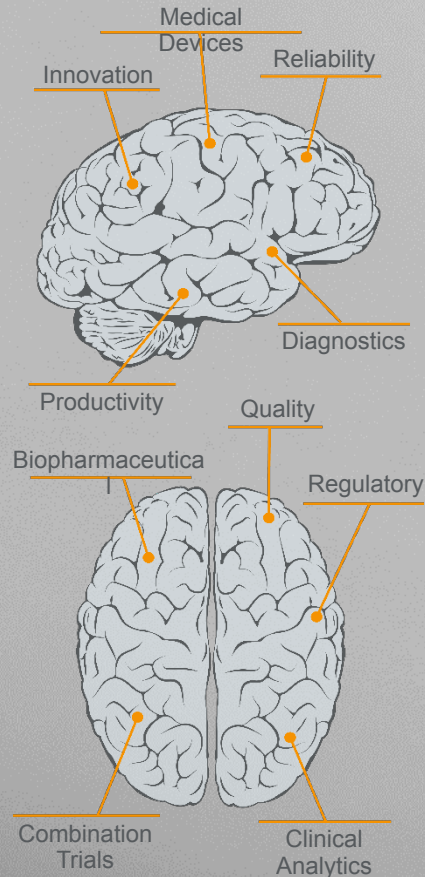


PROJECT METRICS & DASHBOARDS - ASSURANCE OF SUPPLY - κXIs



PROJECT METRICS & DASHBOARDS – THE CURRENT TRENDS

Think



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Information Delivery

- Reporting
- Dashboards
- Ad-hoc Report/Query
- Microsoft Office Integration
- Mobile BI

Analysis

- Interactive Visualization
- Search-based Data Discovery
- Geospatial/Local Intelligence
- Embedded Advanced Analytics
- Online Analytical Processing (OLAP)

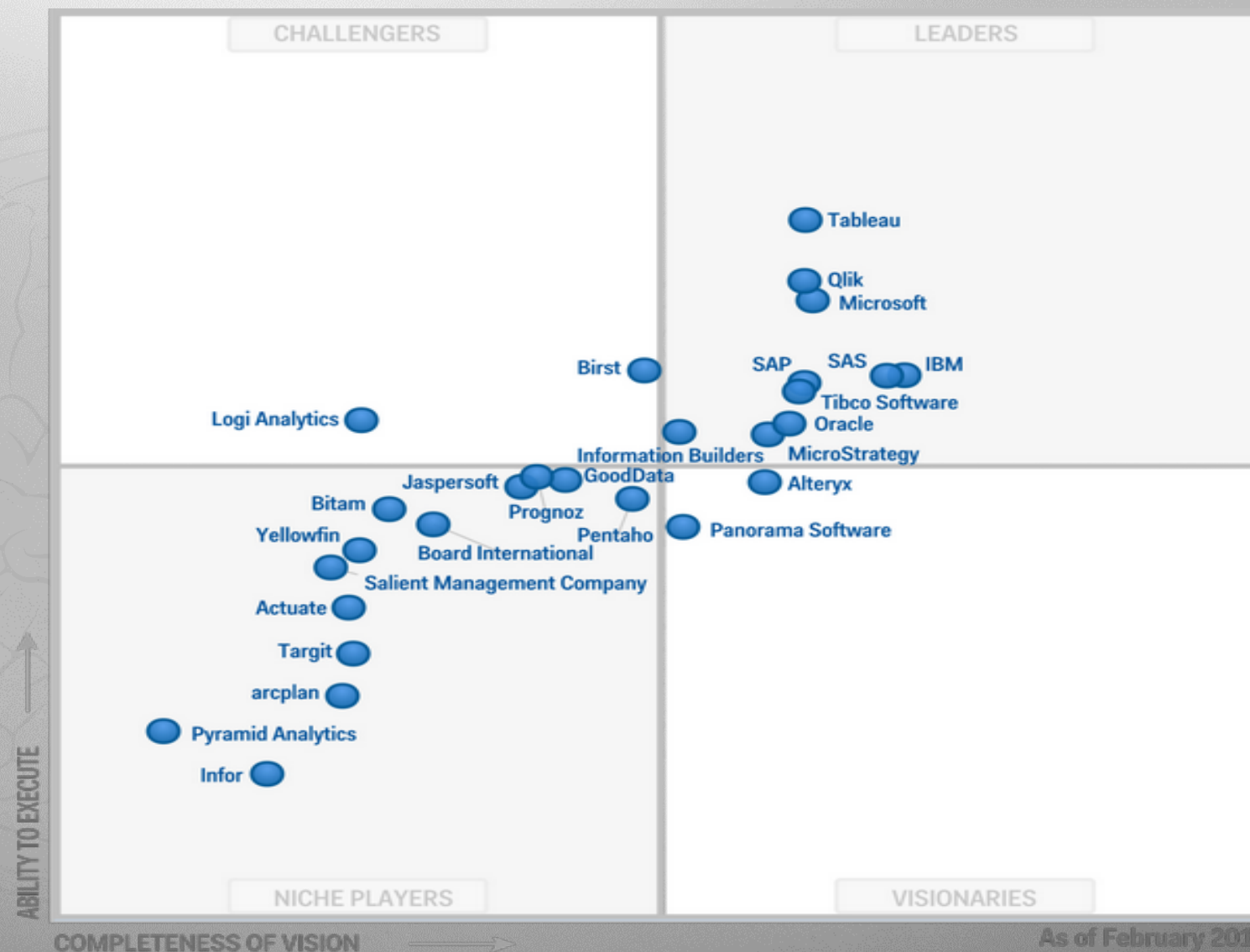
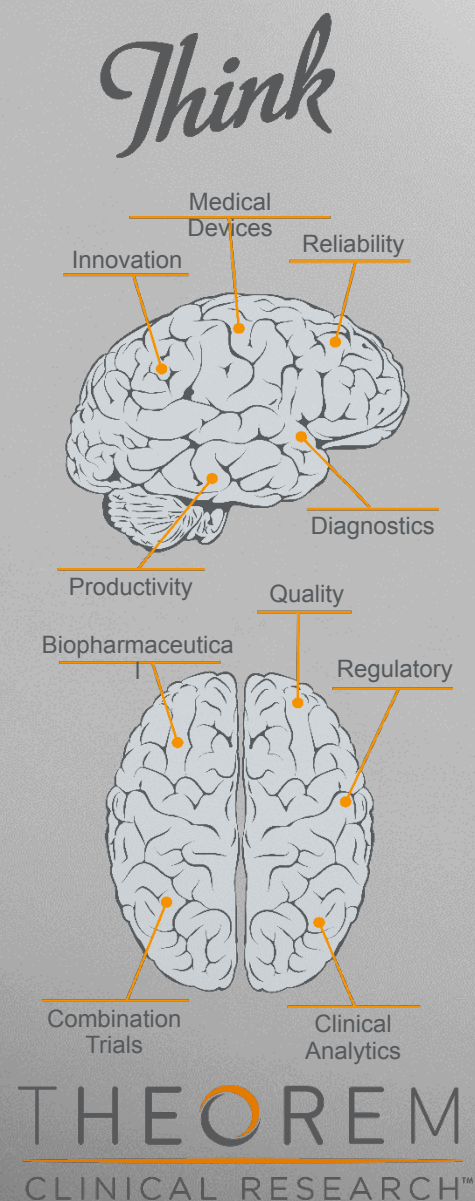
Integration

- BI Infrastructure & Admin
- Metadata Mgmt.
- Business User Mashup & Modeling
- Development Tools
- Embeddable Analytics
- Collaboration
- Support for Big Data Sources

Usage adoption dependent on;

- Ease of use
- Universal application
- Business-user-driven & orientated data discovery techniques to make analytics beyond traditional reporting
- Usability – expanded use by a broader range of end-users (consumers/non traditional BI users) and use cases
- Mobile access
- Ability to leveraging new data types and new types of analysis
- Fatigue avoidance
- Deployment issues/systems immaturity
- Market pressures

MAGIC QUADRANT FOR BUSINESS INTELLIGENCE AND ANALYTICS PLATFORMS

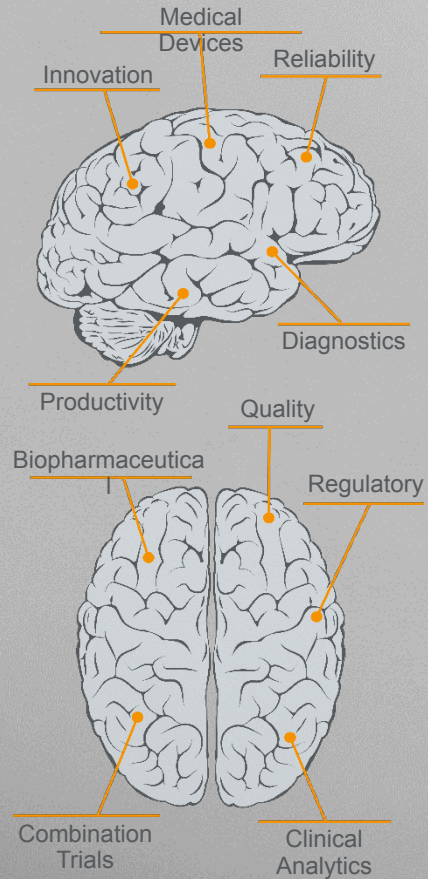


As of February 2014

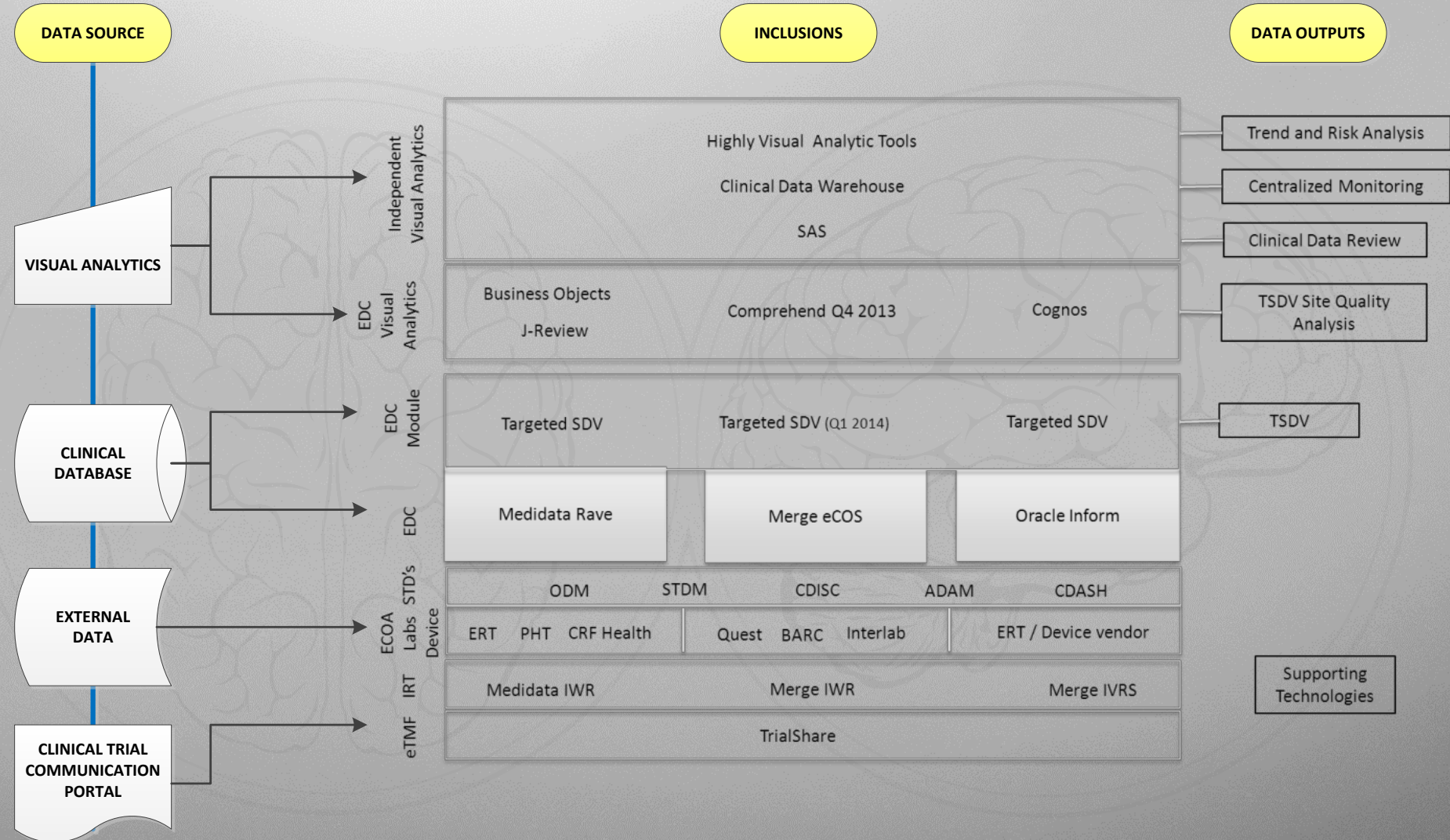
Buyers should evaluate vendors in all four quadrants & not assume that only the Leaders can deliver successful BI implementations

PROJECT METRICS & DASHBOARDS - ENVIRONMENT INCLUSIONS

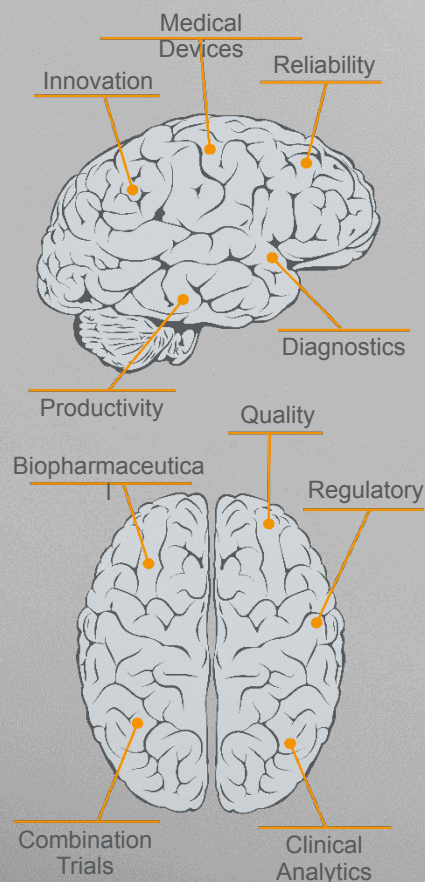
Think



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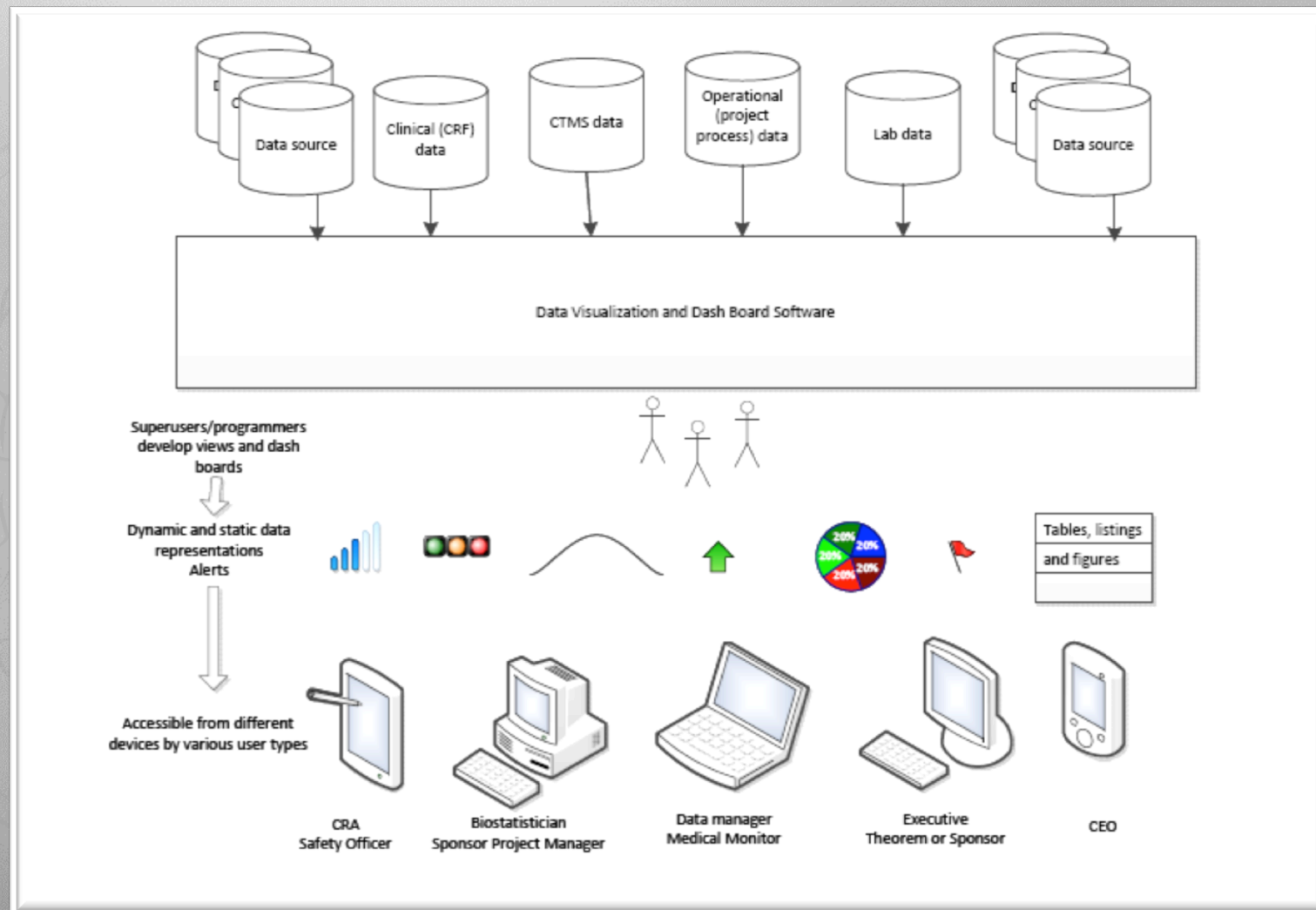


Think

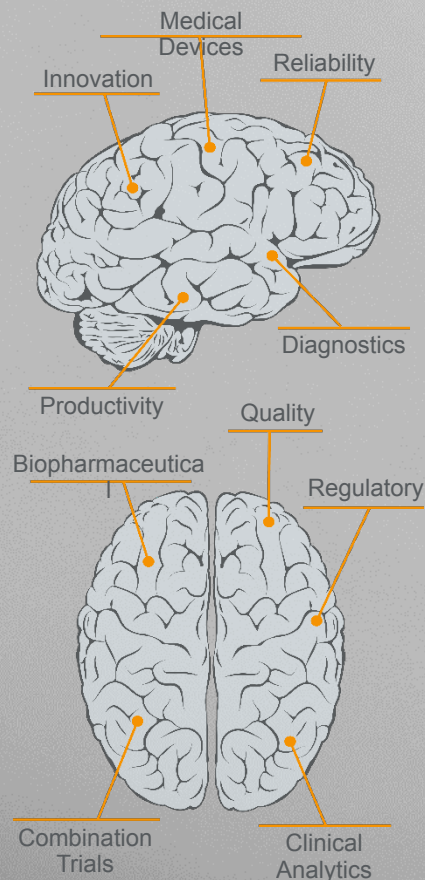


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PROJECT METRICS & DASHBOARDS – ENVIRONMENT OVERVIEW



Think

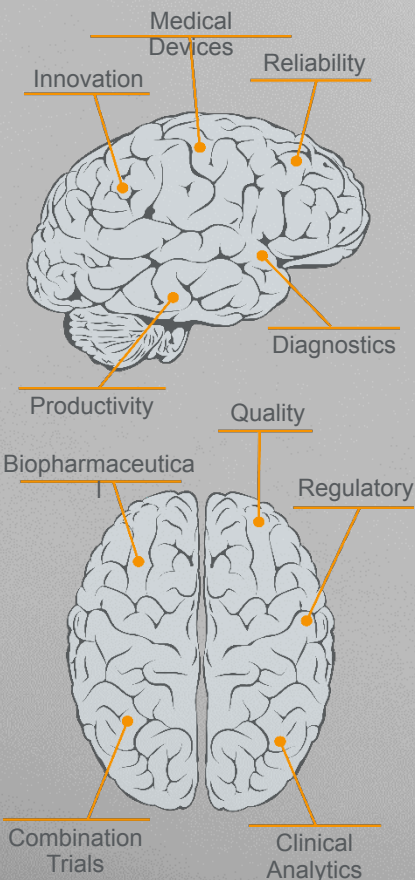


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If you simply google on "visual analytics dashboards" = 1.9MM results
Taking same approach with "project metrics" = 50.7MM results.....

Think



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PROJECT METRICS & DASHBOARDS - METRICS WE LIVE BY

KPI Area	KPI Metric	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
Business	Study Design, Electronic Data Administration start-up Resource Assignments (Start up Activities only)	●	●	●	●	●	●	●	●	●	●	●	●
	Edit Check Resource Assignments (Start up Activities only)	●	●	●	●	●	●	●	●	●	●	●	●
	RBC Compliance	●	●	●	●	●	●	●	●	●	●	●	●
	Staff Turnover - Overall	●	●	●	●	●	●	●	●	●	●	●	●
Delivery	Study Start Up (SSU) Target Met	●	●	●	●	●	●	●	●	●	●	●	●
	Data Loads Delays	●	●	●	●	●	●	●	●	●	●	●	●
	Snapshot Delays	●	●	●	●	●	●	●	●	●	●	●	●
Quality	Unintentional PUBD Load in CTDB	●	●	●	●	●	●	●	●	●	●	●	●
	Unintentional DB Unlock Rate	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate DB Build - Post Prod	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate EC Build - Prod	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate EC Build - pre prod (for RAVE, CF and SAS ECs)	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate Report Build - post Prod (CDR)	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate SAS EC Build - Post Prod	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate Custom Function (CF) EC Build - post Prod	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate EDA Configuration - Prod	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate Snapshot	●	●	●	●	●	●	●	●	●	●	●	●
	Error Rate OC Data Delete	●	●	●	●	●	●	●	●	●	●	●	●
	Data Files Loaded Cycle	●	●	●	●	●	●	●	●	●	●	●	●
	Clinical Data Reporter Request Cycle	●	●	●	●	●	●	●	●	●	●	●	●

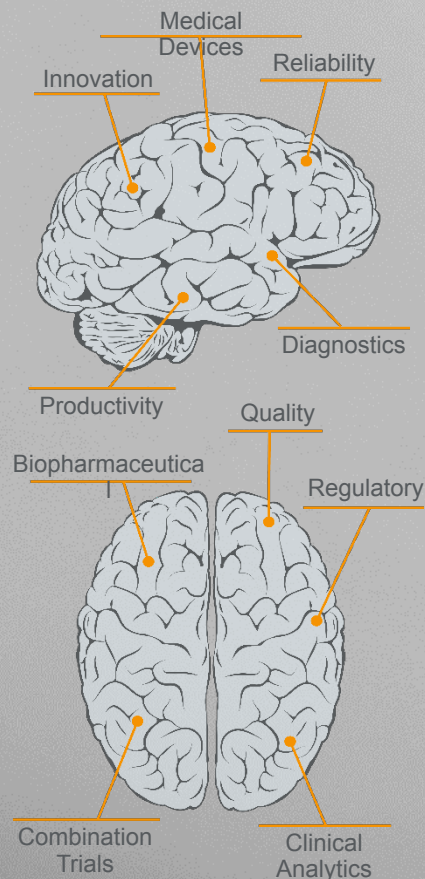
- R/A/G scoring in play
- Mthly aggregation/reporting
- Governance in place

Vendor Capabilities													
Clinical and operational oncology expertise. Average = 50% of overall trial portfolio is oncology	3	3	2.5	5	4.5	3	4	4	2.5	3	2	5	NA
Access to oncology patients (enrollment trends). Average = Meets 75% of forecasted X trial enrollment	NA	5	3	4	NA	3	NA	3.5	3	3	3	NA	NA
PI/Site interface (PI/site dedication/uptake). Average = Meets site participation target numbers with 1 trial feasibility/first attempt on X trials	NA	5	3	4	NA	3	NA	3.5	3	3	3	NA	NA
Recognized areas of oncology expertise (tumor types). Average = Trial experience in last 2 years with 5 tumor types	2	3	3	5	4	3	3	4	3	3	2	4	NA
Geographical presence. Above Avg = North America , Europe and additional locations (ie. China, Korea, etc) . Average = North America and Europe. Below Average = Only North America or Europe	3	3	4	3	3				5	4	3	5	NA
CRO Service Capacity. Average = Has capacity for every X trial /project offered	2	3	4	2	4				4	3	3	4	3
Overall Timeliness (ie. avg. eDC build time, audit issue resolution, action items, invoicing, etc...) Rate each category →Average = Meets X study team timeline expectations 75% of the time overall	2	4	5	3.5	4	4	4	2	4	4	3	3	2.5
Overall Adaptability / Flexibility. Average = willing to adapt 50% of the time when asked on X trials/ projects	4	4.5	4	4	4	4	4	3.5	4	5	4	4	4
Overall Quality – Non-Data Mgmt. (ie. Audit issue trends, # of Deviations/protocol violations, etc...) Rate each category →Average = Meets X study team quality expectations 75% of the time overall	3	4	3	3	3	3	3	3	3	3	3	4	NA
Pricing Trends-- Above avg = < 10% of target CRO budget. Avg = 10 to 20% of target CRO budget. Below avg = > 20% of target CRO budget	3	4	2	5	3	4	3	3	3	3	3	3	NA

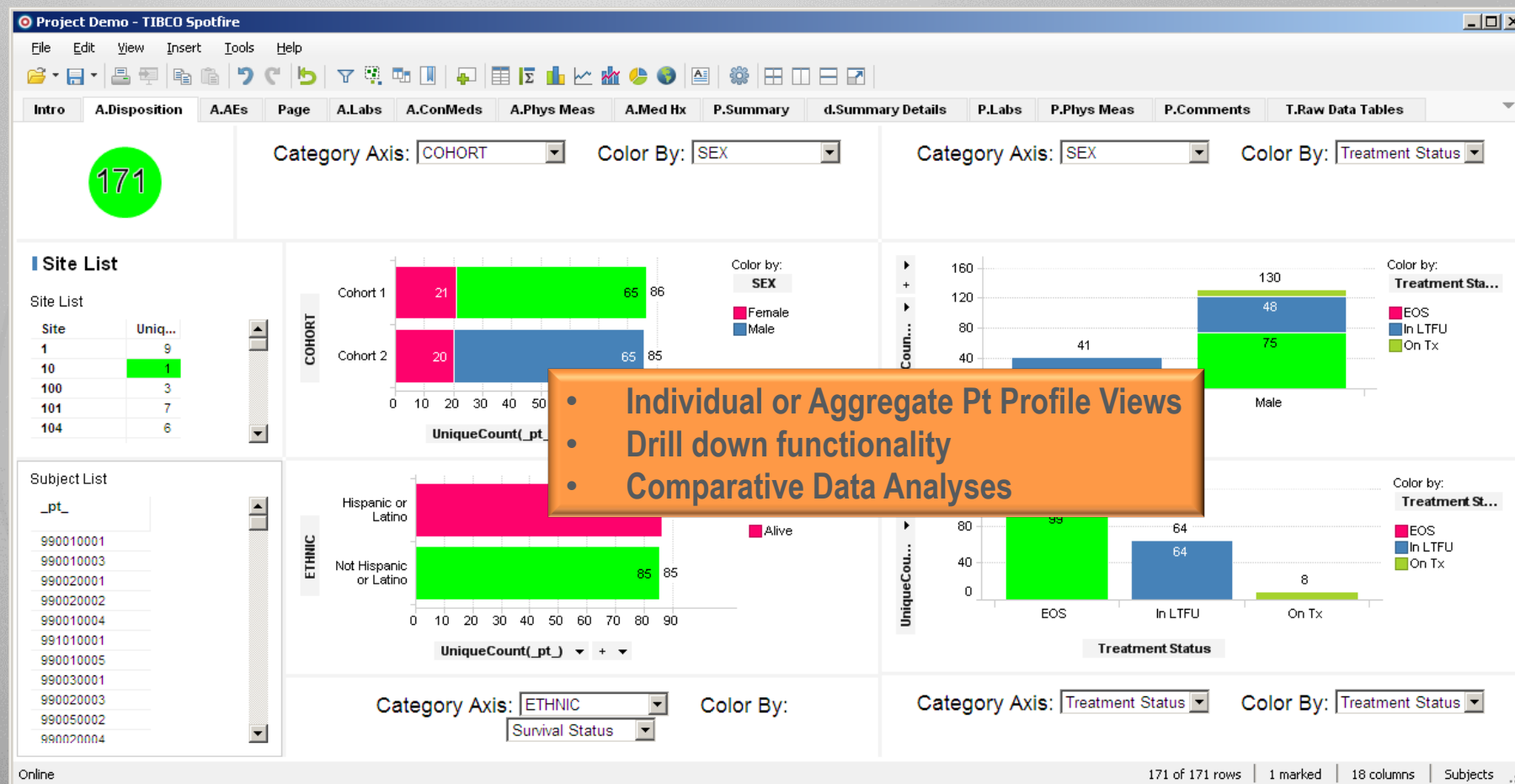
- R/A/G Scoring in Play
- Mthly aggregation/reporting
- Governance in place
- Mutli-vendor Comparison

Think

- Data Review and Patient Profile

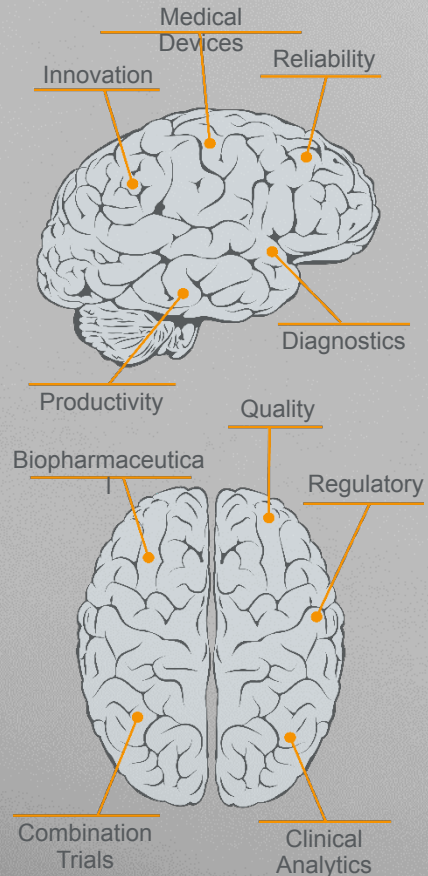


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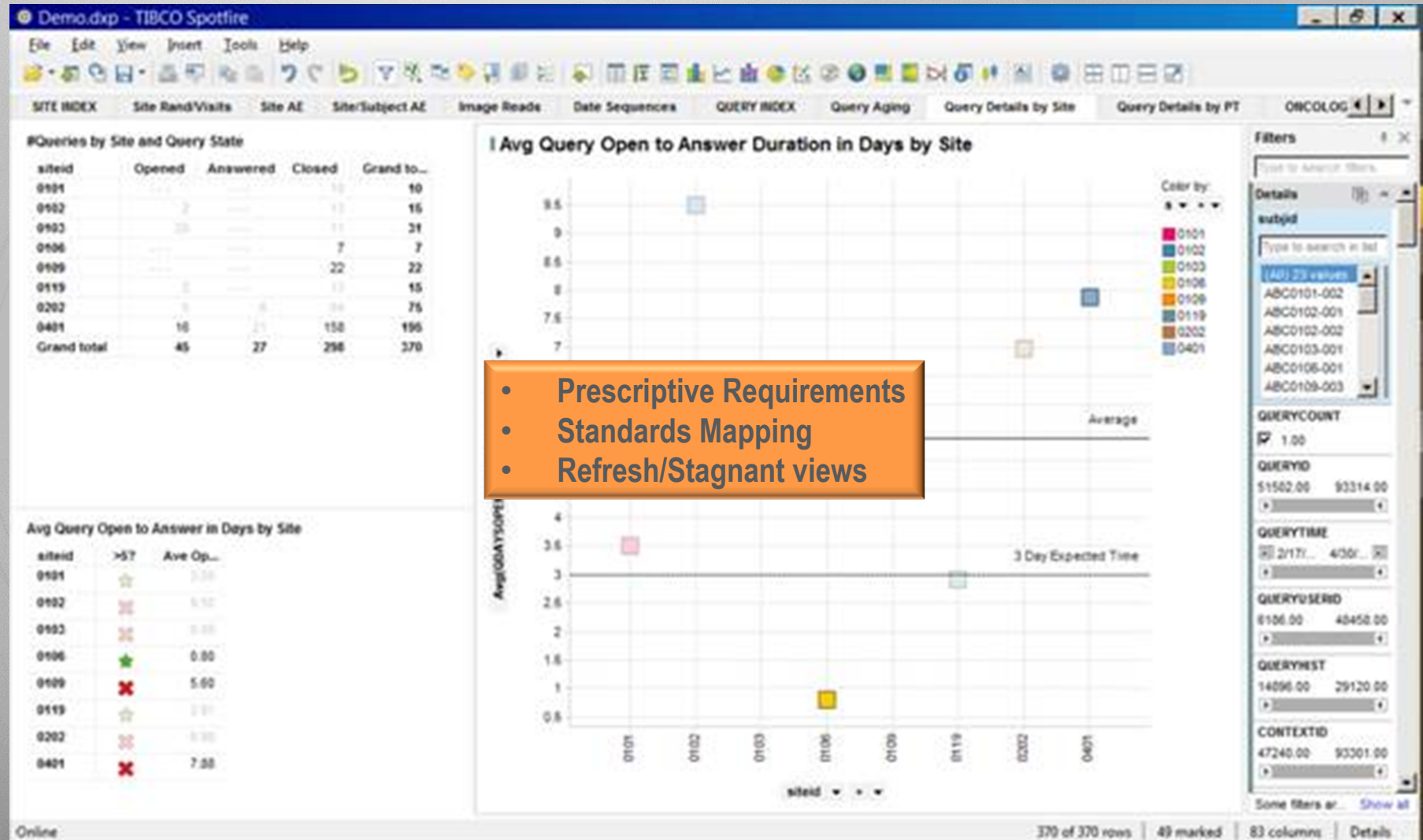
- Individual or Aggregate Pt Profile Views
- Drill down functionality
- Comparative Data Analyses

Think



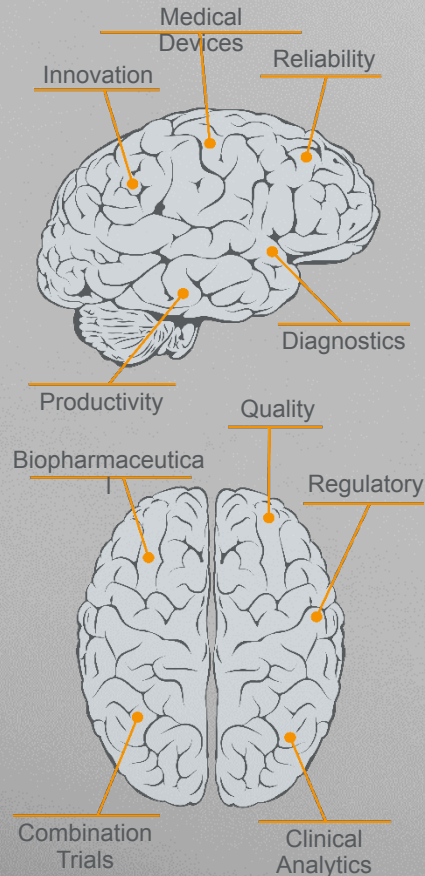
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- Metrics

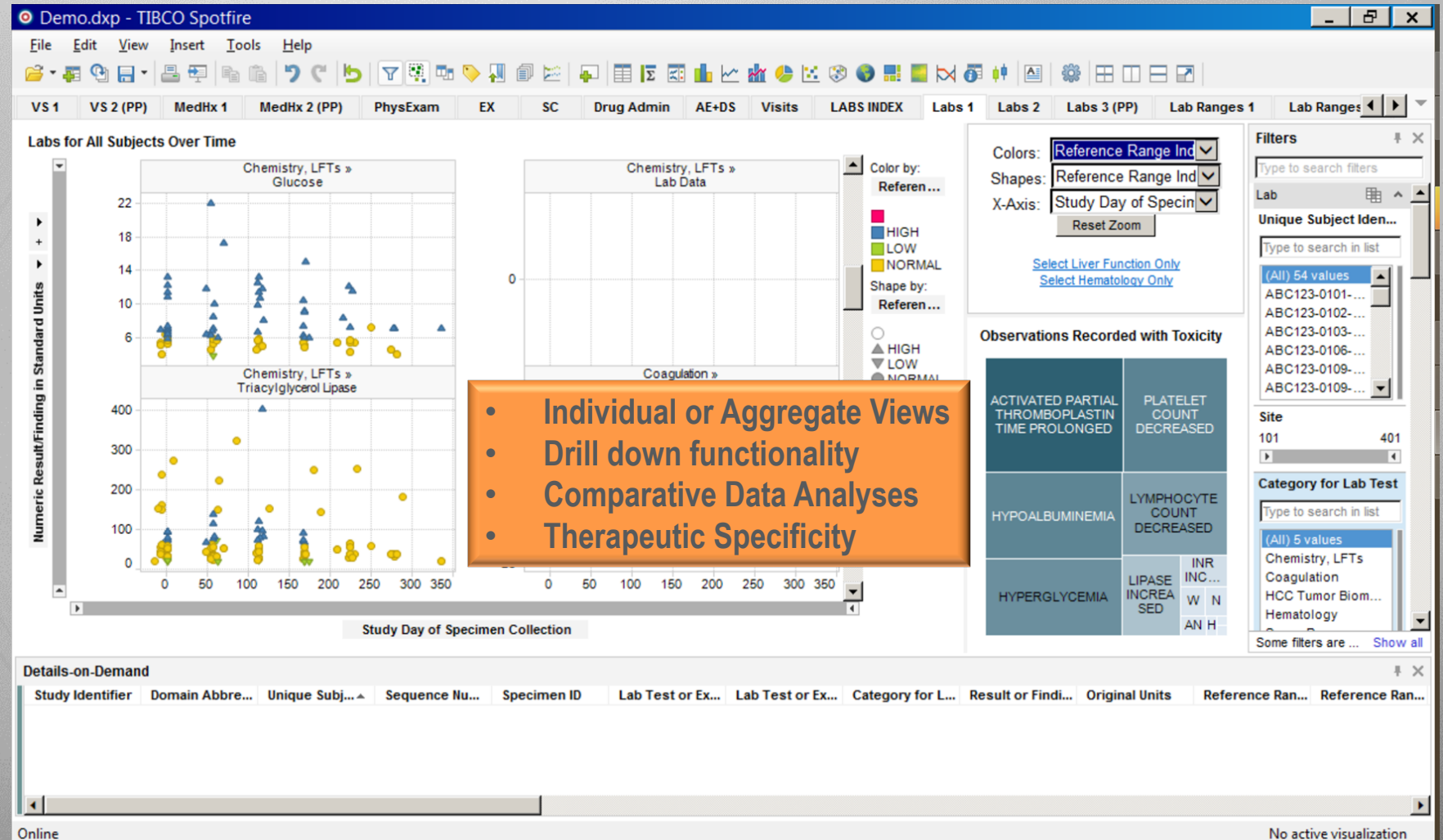


Think

- Safety and Efficacy

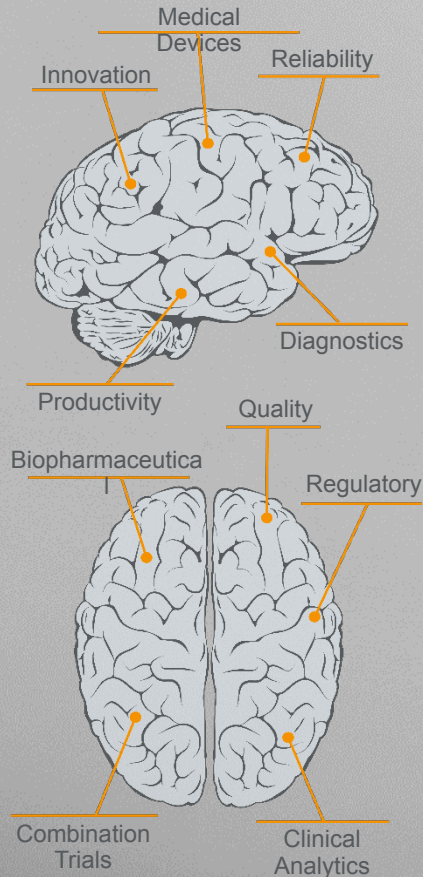


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- Individual or Aggregate Views
- Drill down functionality
- Comparative Data Analyses
- Therapeutic Specificity

Think



- Develop and agree requirements across all stakeholders
- Take a phased approach – use data you have and can easily access for PH 1
- Keep the number of metrics down – identify a few key metrics that will really help you spot problems quickly – don’t “drown in data”
- Add sophisticated stats later if you like – but putting key pieces of data side by side can tell you a lot just on its own so keep it simple (but use a “proper statistician” if you use fancy stats)
- Architect it well so you develop over time and don’t have to reinvent the wheel when you add something new.....standards, security model etc.
- Make it easy to look at and interpret – there is a real art to creating good visualizations
- Make it robust (i.e. make sure it works) and easy to navigate
- Keep the end user in mind.....



Thank You