



Data value chain in clinical research

Presented by
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Who are we?



Our Focus

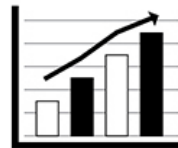
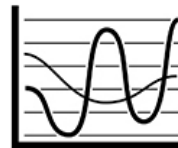
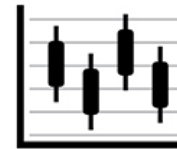
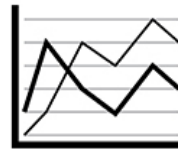
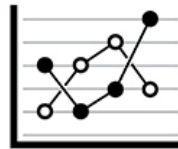
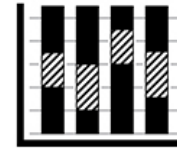
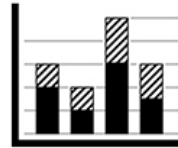
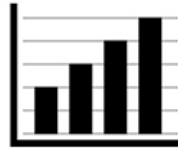
Clinical Data Intelligence

- Operational Analytics
- Trial intelligence
- Risk based monitoring
- Performance metrics

Our team has combined 150 years of domain experience and have previously worked for:



Era of big data



Perspective

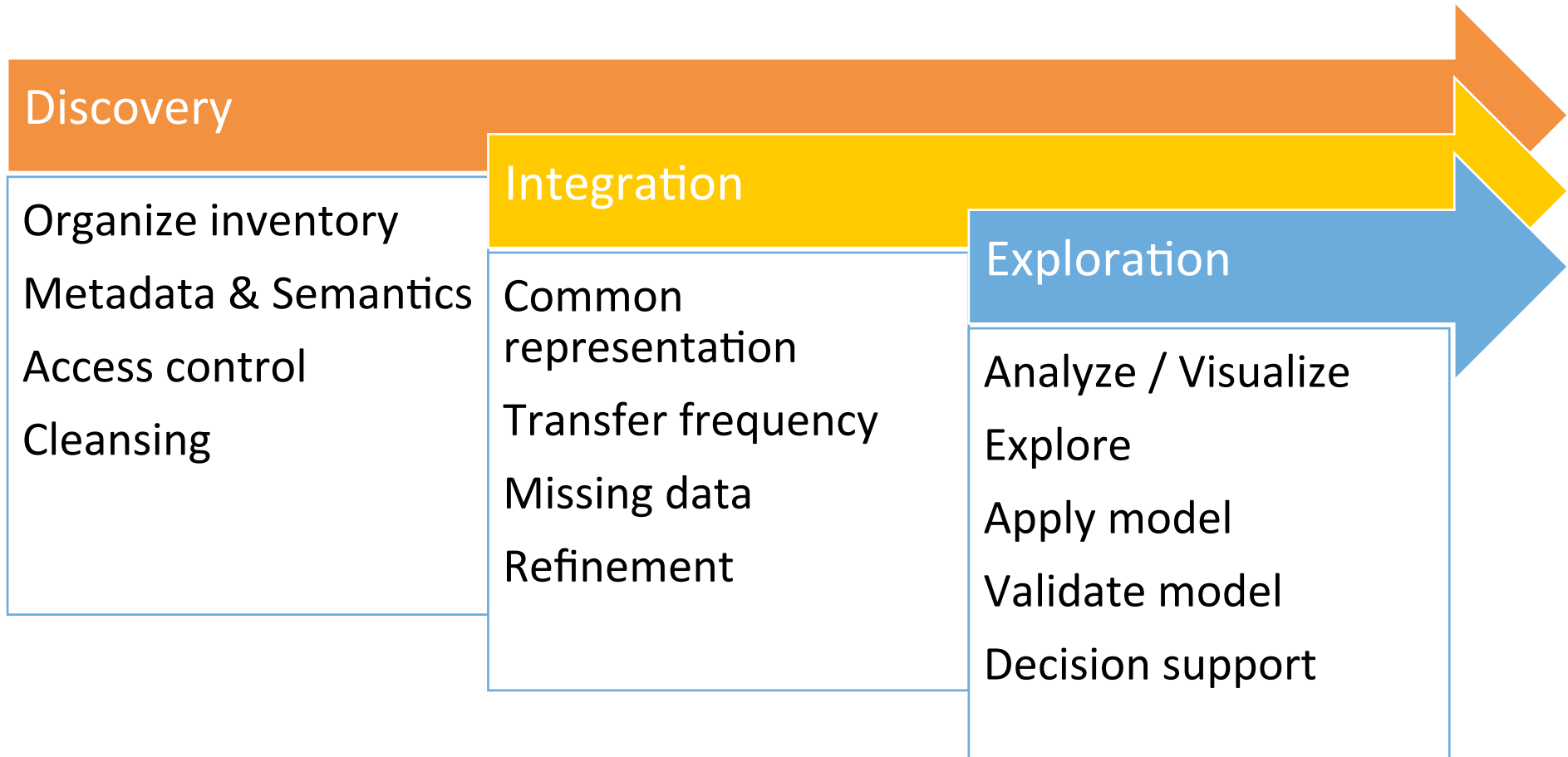


APPLE

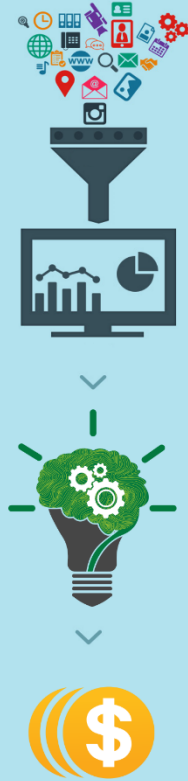
Context?
Form?



Defining Value chain



Data to Trend



Data
Insight
Decision
Action
Trend

Clinical research data



Industry pain points

THE HIGH COST OF FAILURE

Development costs for New Molecular Entities (NMEs) and Biological products approved between 1980 and 2008:

	DIRECT COSTS (\$US Millions)		CAPITALIZED COSTS (\$US Millions)	
Basic Research through Preclinical	\$60	17%	\$186	15%
Clinical through Regulatory Approval	\$109	34%	\$189	15%
Allocated Failures	\$166	49%	\$866	70%
Total per Approved Drug	\$335		\$1,241	

Source: Tufts Center for the Study of Drug Development at Tufts University

Good Bad Ugly



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GOOD BAD UGLY

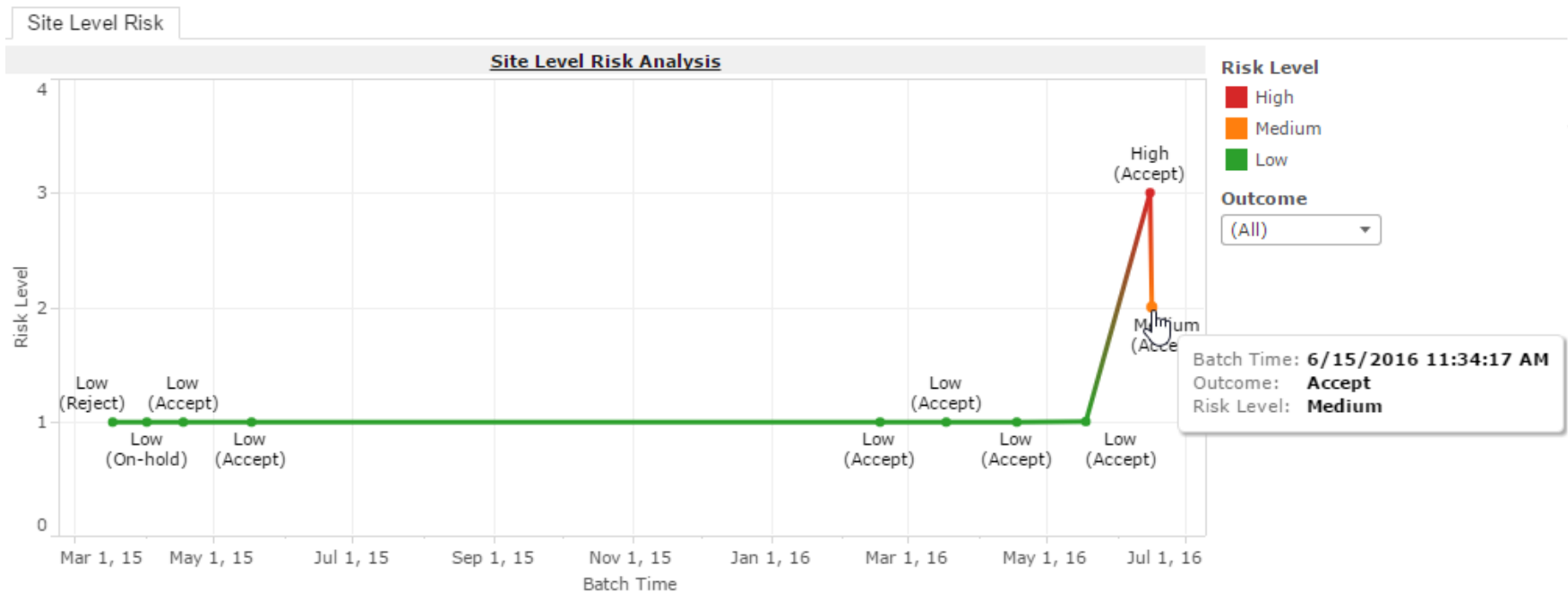
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7211	22	49	14	2
7214	14	3	51	10
7215	16	20	14	26
7217	17	19	15	28
7225	2	1	51	4

Site Insights

SiteId	Documentation_issues	No_of_Adverse_Event	Actual_Enrollment	No_of_queries_raised_or_open
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7211				
7214				
7215				
7217				
7225				

Decision Trending



Macro level impact

Funded by// Number of trails that are currently recruiting under different phases	Phase I	Phase II	Phase III	Phase IV	Row Total
Industry (Pharma/ Biotech/ Research Org)	2319	3090	1888	1186	8483
National Institute of Health	762	1127	300	127	2316
Other US federal Agency	106	175	89	59	429
Investigator initiated/ University/ Organizations (Academic)	2492	5443	2949	3187	14071
Column Total	5679	9835	5226	4559	25299

Application Areas



Disease pattern analysis
Clinical trial monitoring
CRO collaboration
Portfolio planning
Enrollment prediction
Genome sequencing
Manufacturing process control
Supply chain logistics
Patient care quality

Reference

- <http://www.ibmbigdatahub.com/blog/understanding-data-value-chain>
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- <http://www.tcs.com/SiteCollectionDocuments/White%20Papers/Pharmaceutical-Industry-Big-Data-1113-2.pdf>
- <http://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/how-big-data-can-revolutionize-pharmaceutical-r-and-d>
- http://www.fisherclinicalservices.com/wp-content/uploads/2014/03/Whitepaper_Global-Clinical-Trial-Challenges.pdf

Thank you!!!

