

analytics [an-l-it-iks] *n.*

the discovery and leverage of meaningful patterns and relationships in data to extract useful information.



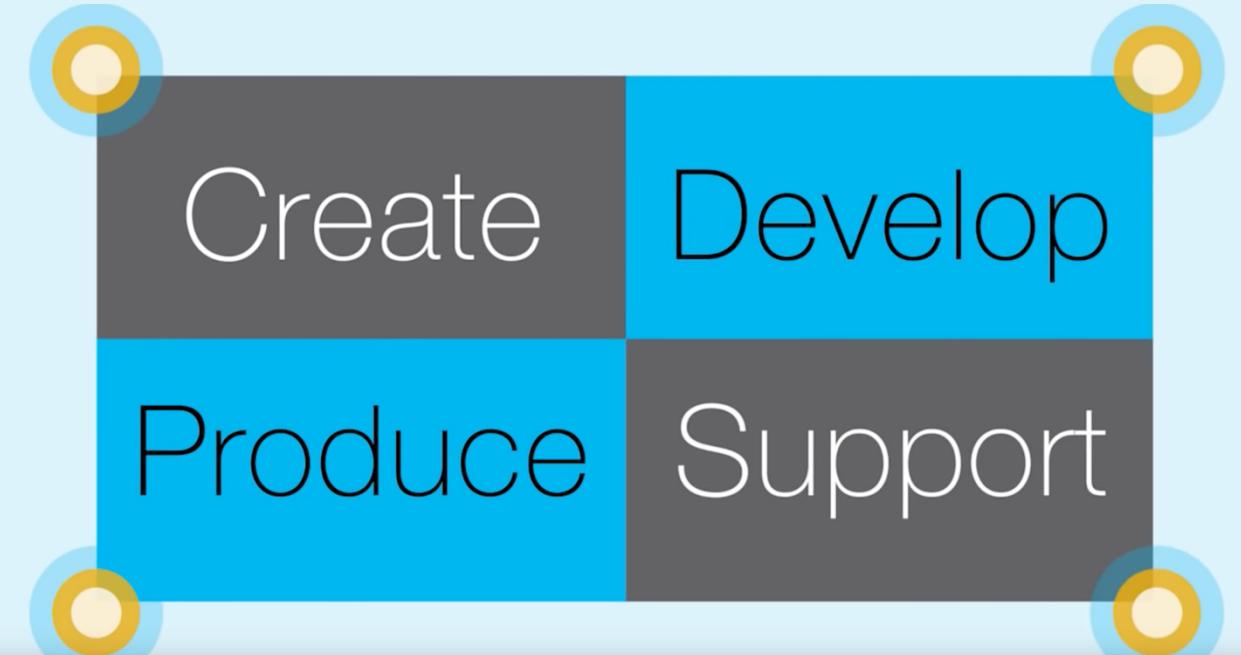


Acquire

Store

Learn

Apply



Create

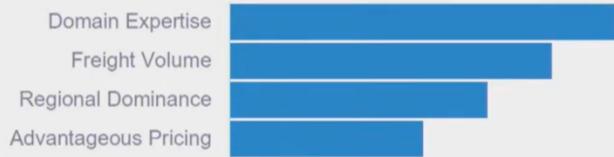
Develop

Produce

Support

Fragmentation of Transportation

Historical Factors of a Fleet's Success



Effects

- Very little market-wide data available
- Every fleet has their own “secret sauce” they protect at all cost
- Brokers have access to the most data points

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It is not simple....involves analyzing petabytes of data (~2 trillion records)

	Daily Transaction		OLTP (90 days)		OLAP (2 yrs @ 200days/yr)	
	TL & LTL & PF	Home delivery	TL & LTL & PF	Home delivery	TL & LTL & PF	Home Delivery
Industry	100%	5%				
Market Penetration (worst-case)	3,500,000	100,000,000	3,500,000	100,000,000	3,500,000	100,000,000
Drivers	2,700,000	235,000,000	2,700,000	235,000,000	2,700,000	235,000,000
Assets	2,700,000	5,000,000	243,000,000	450,000,000	1,080,000,000	2,000,000,000
Loads	8,100,000	10,000,000	729,000,000	900,000,000	3,240,000,000	4,000,000,000
Orders (Loads x 3)	24,300,000	30,000,000	2,187,000,000	2,700,000,000	9,720,000,000	12,000,000,000
Commodity (Orders x 3)	40,500,000	50,000,000	3,645,000,000	4,500,000,000	16,200,000,000	20,000,000,000
User Fields (Orders x 5)	162,000,000	200,000,000	14,580,000,000	18,000,000,000	64,800,000,000	80,000,000,000
Order Audit (Orders x 20)	24,300,000	30,000,000	2,187,000,000	2,700,000,000	9,720,000,000	12,000,000,000
Records (Orders x 3)	162,000,000	200,000,000	14,580,000,000	18,000,000,000	64,800,000,000	80,000,000,000
Events	1,620,000,000	6,000,000,000	145,800,000,000	540,000,000,000	648,000,000,000	2,400,000,000,000
GPS Updates (Loads x 600)	2,700,000		243,000,000		1,080,000,000	
Invoice						
IoT						
Rates						
Driver Pay, Settlements						
Integration						
Others						
Total	2,052,800,000	6,860,000,000	184,200,200,000	587,585,000,000	818,646,200,000	2,610,335,000,000

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Components

Data Access	Governance	Operations	Security
Hive 1.2.1/TEZ 0.7	Atlas 0.7.0	Ambari 2.4.2	Knox 0.9.0
Spark 2.0	Ranger 0.6.0	Oozie 4.2.0	Ranger 0.6.0
Hbase 1.1.2		Talend*	Kerberos
Phoenix 4.7			
Zeppelin 0.6			
SSIS*			
NiFi 1.1.0			

*Not part of Hortonworks Data Platform

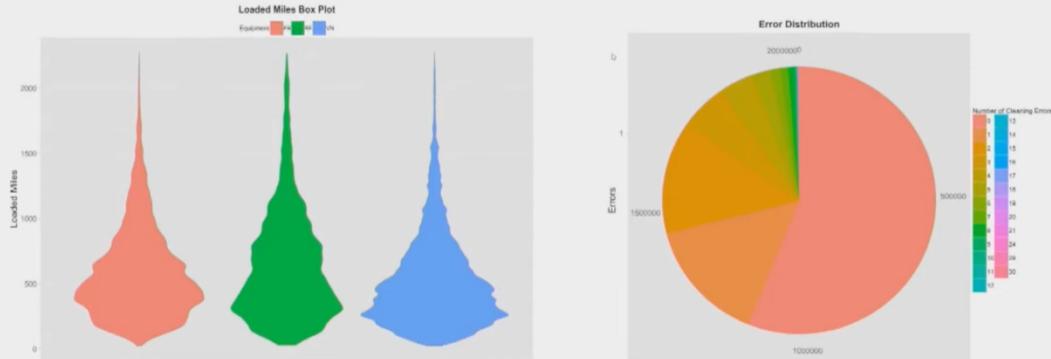
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Market Rate Index Visualizations

- Facilitates telling and sharing stories about data.



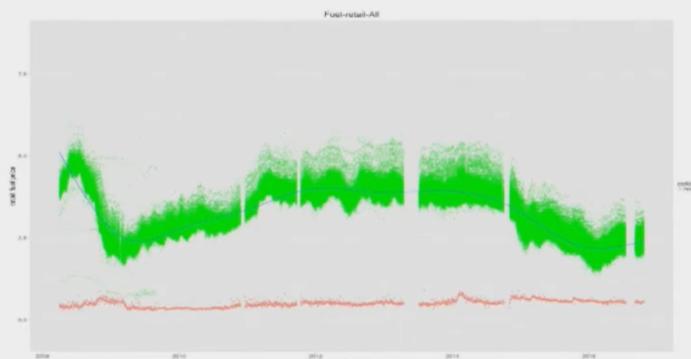
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Fuel Data Analysis

- White paper for analyzing fuel prices and providing evidence towards the value that ExpertFuel provides.



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Transportation Data Lake For the entire Industry



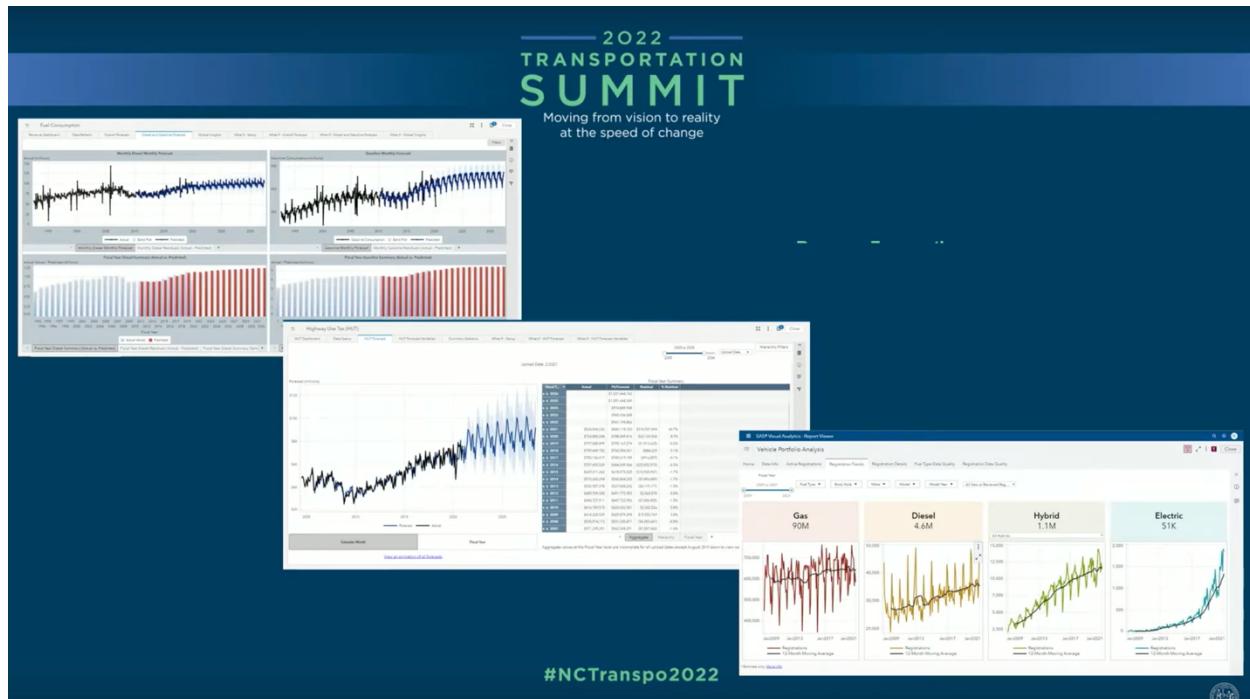
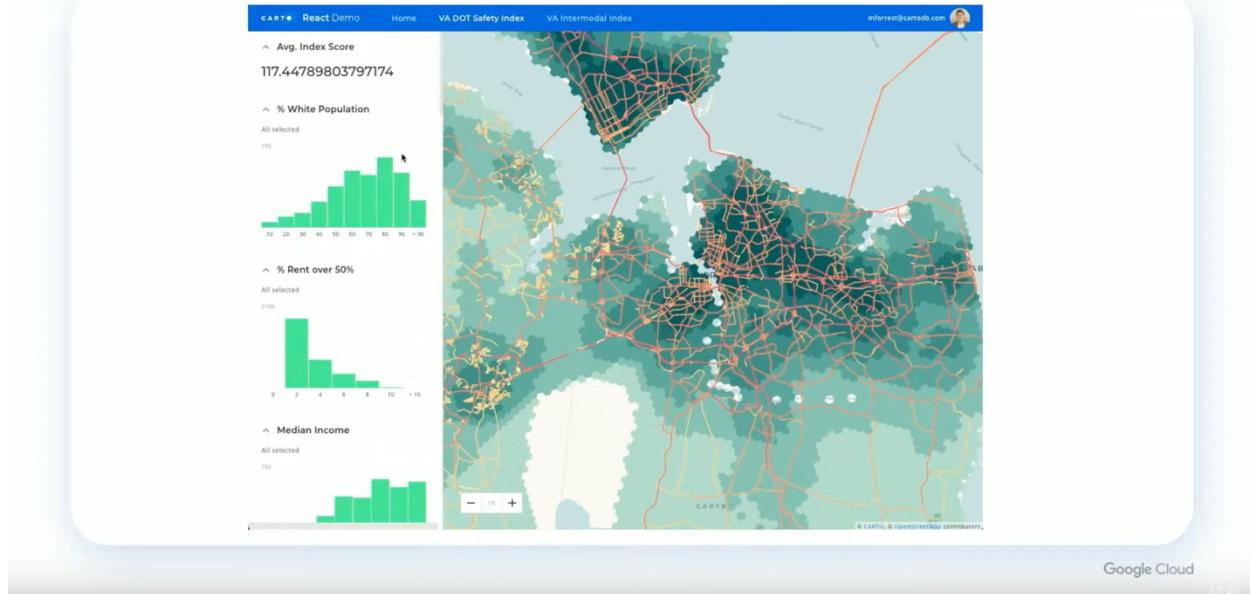
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Equity Index A data driven approach to transportation equity

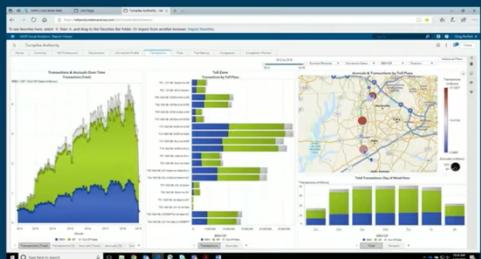
Proprietary + Confidential



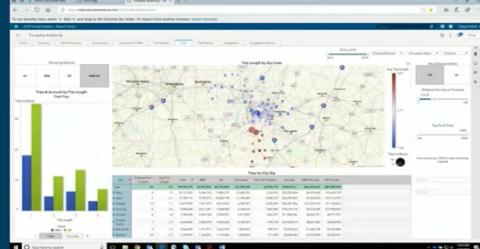
2022
TRANSPORTATION
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Moving from vision to reality
at the speed of change

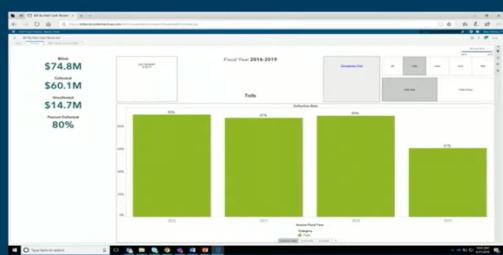
Toll Transaction Insights



Toll Trip Analysis



Collections Insights

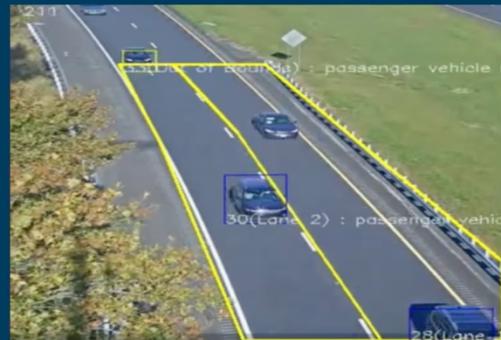


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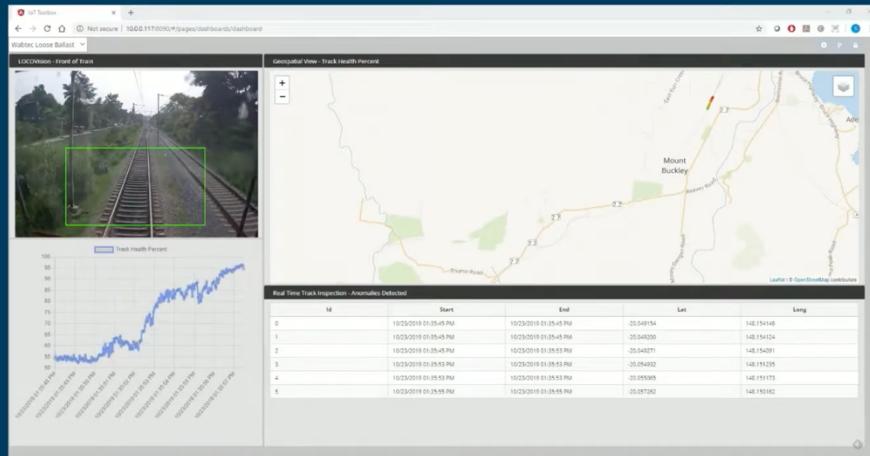
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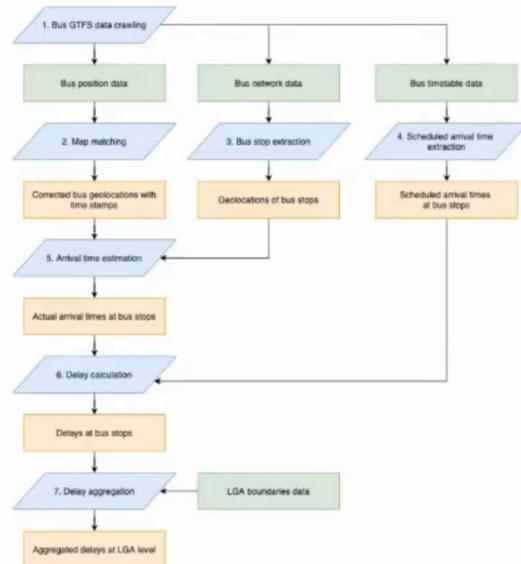


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LGA driven analysis



LGAs in Sydney metropolitan region. The red lines are the boundaries of LGAs



The methodological framework to quantify bus delays at each LGA

Train passenger modelling – V/line, Victoria

