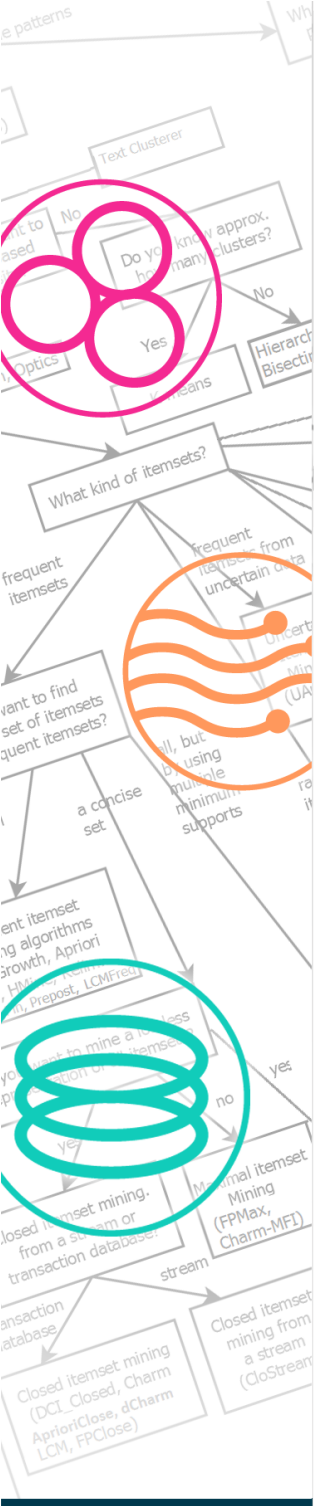

The Digital Data Mart: The Business Model of the Future

By Tim Panagos

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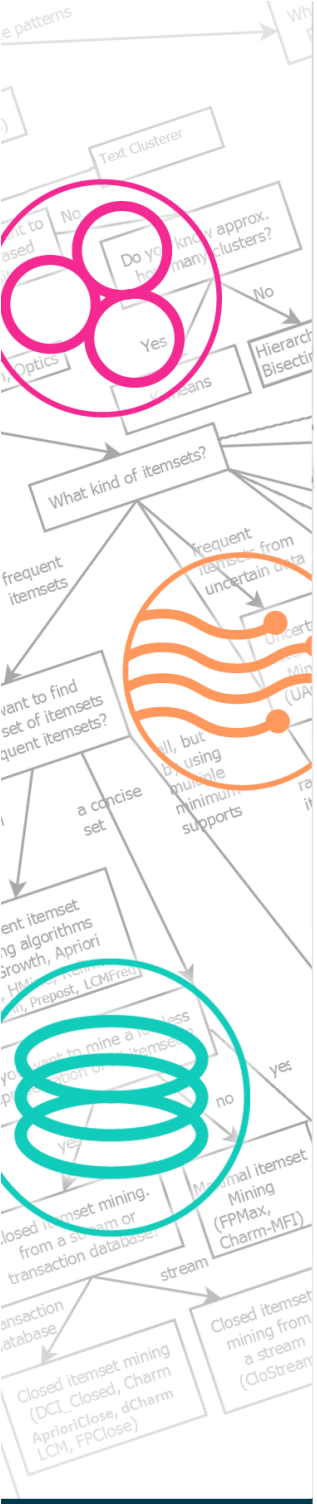

The Digital Data Mart: The Business Model of the Future

By Tim Panagos

Companies are increasingly awash in data. What does that mean? Information Technology has always and continuously generated and processed data and until recently the growth of that data management has been linear. Manageable. Predictable. But, the world has hit the data singularity--a discontinuous spike in the volume, velocity, and variety of data. Many forces have conspired to bring about the data singularity--the spread of mobile computing, the growth in network bandwidth, the advent of IoT. There isn't a single cause. Rather, the data singularity represents the culmination of several macro trends. We live in a world where the marginal cost of generating, transmitting, and storing one additional byte of data is functionally zero. And because the marginal cost is zero, every event that is capable of generated data is doing just that: generating data.

This is creating challenges. Because locked within the data is value as well as risk. The majority of businesses think of their data as being more likely to provoke misuse than to generate value-added use. The default security stance has been to lock-down and discard. These corporate instincts may mitigate risks but they leave a lot of money on the table as they fail to recognize the potential value of historical and cross-functional data analysis. So data governance is focused more (and often exclusively) on data retention (or really the flip-side data disposal) and denial of access rather than on data value-creation. People are overwhelmed. People are frightened.

Data has a strong tendency to resist containment. Our systems are highly networked, our data is naturally in-flight. Eternally on the move, perpetually at risk. Interlaced. Interlocked. In the minds of the risk-averse, a ticking time bomb.

Confronting Data Risk-Aversion

At the same time, there are data-centric organizations leapfrogging competitors, creating brand-new business models, and coming to dominate the social and financial landscapes. Companies like Uber thrive by leveraging data in an unapologetic fashion to crush stolid competition. Naturally this approach is more palatable for an up-start with nothing to lose. Uber's story is mature enough to show the down-

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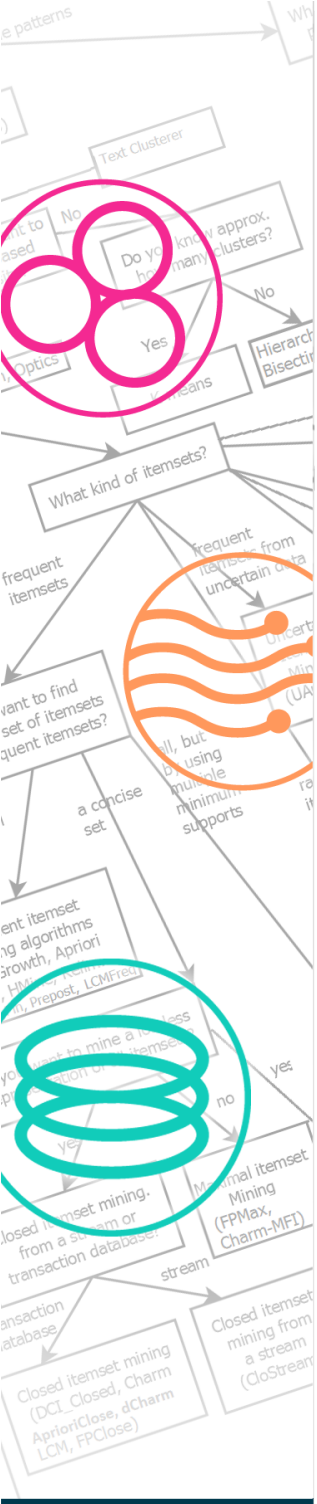


sides of succeeding through flouting rules and breaking glass. Success for them has brought backlash and painted a financial target on their backs.

Facebook is another great example. A company whose business model is nothing but data. No capital goods. No appreciable work-force. Few tangible assets. The company IS data. Data contributed, data derived, and data exploited and monetized. Facebook is, in reality, a marketplace where data is traded. Consumers create social content, partners create experiences to harvest it, and Facebook makes the market. The peril is that individuals participate in the marketplaces without ever recognizing it as such. And consumer expectations of privacy and naïve trust have inevitably been dashed. But, Facebook is not a public utility, nor a charity, it is a platform business with a massive market cap and the investor expectations that come with it.

A modern data mart must provide speed at scale--not merely cloud scale--at a scale beyond cloud scale.

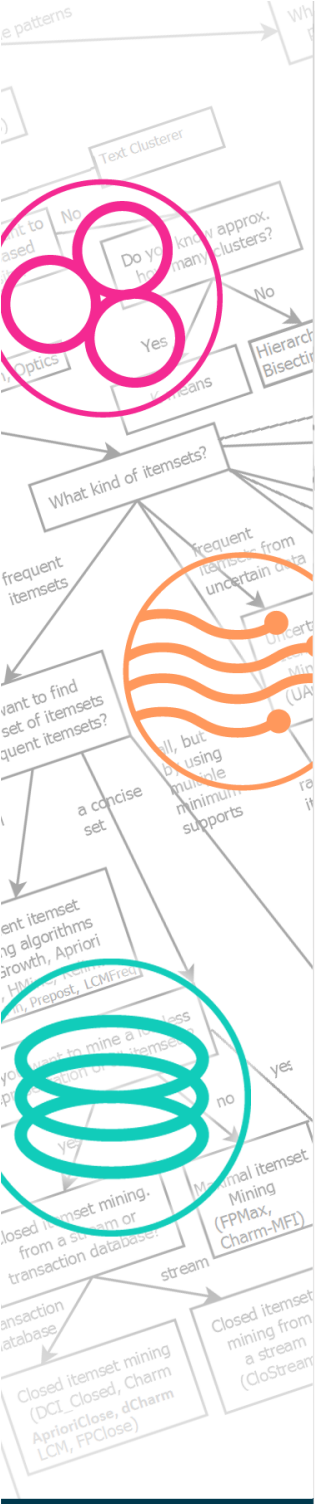
A complex picture. What if data was more manageable for everyone: companies, governments, and individuals? What if Velocity, Volume, and Variety could be more easily morphed into a fourth 'V': Value? What if the risks of fraud, breach, and malfeasance could be reduced even as data usage through sharing is increased? Analytic value could be unlocked by allowing business people armed with artificial intelligence tools to turn reams of multi-dimensional data contributed voluntarily into novel customer experiences, improved efficiencies, and tangible, monetizable value.

The Digital Data Mart

Enter the modern data mart business model. A data mart is a place where data is centrally routed and persistently stored. A data mart is a place where information is protected from potential violators -- rogue governments, hackers, and fraudsters. It is also a place where data can be trafficked as a commodity. This is a place where information can exchanged, bought, and sold with speed, transparency, and confidence.

A modern data mart must provide speed at scale--not merely cloud scale--at a scale beyond cloud scale. Network, disk, processing power: all needing to be powered and cooled, all need to be run 24x7x365. Infrastructure that must be dial-tone dependable and capable of handling billions of transactions per second for data in and data out. Resilient, efficient, and cost-effective.

The data must be protected not because it is sensitive and risky, but because it is



valuable. Data is inventory. A modern data mart must be protected against threat of theft and catastrophe. Data that is stored must be retrievable at any time, from any place, forever. Risks must be constantly assessed and threats neutralized actively.

A modern data mart must be trustworthy. A brand that speaks of integrity and scale. A data mart must be trusted by all participants from sophisticated multinationals in London to retired school teachers in Indiana. The brand must be established and speak immediately to the assumption of the above stated scale, stability, and security.

The Digital Ombudsman: The Data Mart's Arbitrator

A data mart must be trusted by all participants from sophisticated multinationals in London to retired school teachers in Indiana.

A data mart must also provide arbitration, a means for balancing the often conflicting rights and responsibilities of the many participants in the data ecosystem. A data mart must offer a digital ombudsman, an ever-ready ally that provides transparency and control to all participants. The digital ombudsman also ensures overarching protections that reflect regional regulations and granular policies that reflect the intents and aspirations of individuals. This capability is only possible with economies of scale that spreading the costs of compliance and speeding the time to value for data creators, curators, and consumers alike.

We believe that the world needs and is ready to pay for one or more data mart providers. Cloud providers may not be best positioned to fulfill this role; their technical competencies may align but their brands often do not inspire confidence. Indeed, we believe that the world will turn to more classically trusted entities: the Swiss banker, the gold standard. Companies like First Data, with their hard-earned reputations for managing large volumes of networked data, look well placed to assume this important role. Payment streams, after all, rank among the most sensitive and valuable data in the non-classified world. Why would you not trust your car's IoT data stream to time-tested experts like First Data or SAS when you already entrust them with so much of your backend and payment infrastructure?

Yet a data mart needs more than a trusted processor. As in payments, data-generating ecosystems may need the equivalents to Mastercard and Visa: non-governmental standards bodies that establish regulations and take-on the use-case specific mediation challenges that can arise. There is the need for some company to underwrite the risks of data loss, to create a more liquid market. At Microshare, we believe that this is the ultimate scalable business model and we have scaled our data sharing and governance efforts for precisely this moment: the onset of data

singularity. We eschew IT-oriented metrics and billing models based on concepts like gigabytes stored. Today's data tremors will build into a tsunami that will wash away such earthbound calculations. The simple formulae behind these approaches cannot keep up.

To the contrary, in the era of the data singularity only a true marketplace will suffice. Data's value, like other commodities traded openly, will be set by market demand under a controlled and regulated environment. This seems a radical idea to some and many incumbents will resist since their own revenue streams depend on walled garden approaches to pricing, storage, and data ownership. But like all walled gardens, these too will crumble under the weight of their own lack of ambition. No wall, whether regulatory or implemented by quasi-monopolistic technology giants, will long resist the power of the ocean. We believe an ocean is precisely the right analogy for the era now beginning, an ocean that can be channeled, whose power can be harnessed, but only if it is not resisted.

Tim Panagos is Chief Technology Officer at Microshare Inc., a Philadelphia-based leader in data governance and IoT data management solutions.

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