**Title:** Basic thoughts: **The changing world of insights, and why companies should act now!**

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**Note: Back in 2010 was the year for the wakeup call for Information Management that is driving dynamic analytics. 2016 was the years of execution of Information Management and descriptive Business Analytics. This has now driven the time to value model supporting Cognitive models for business and customers. Take the steps you need to become a data driven enterprise.**

**The changing world of insights, and why companies should act now!**

Businesses, both online and offline, are under increasing pressure to understand and respond to their customers in a more accurate, more personalized and more timely way. To achieve this, organizations must make an investment in intelligent use of data.

 According to Gartner, organizations that can proactively adapt to this changing landscape and execute on a strategy that narrows the gap between enablers, producers and consumers, will be positioned to advance their analytics maturity and expand the use, impact and value of their AI initiatives.

Data is being created at an unprecedented speed with 80% of it sitting behind organizations’ firewalls.

Businesses is storing these pools of data but haven’t exploited it value to insight. This has been observed and stated in several articles that less than 2% of a company’s data is touched after it is stored the first time.

The business history, and all the data behind it is an untapped competitive advantage.

Business and technology architectures are changing at the same time causing a tsunami of change and new skills required.

When you combine data and cognitive models, businesses can drive value exponentially. What couldn’t be done a few years ago and is now necessary and expected.

**This is driving the need for Framework and Model Management**

90% of the effort in successful machine learning insights is to drive business value with the right framework and models.

What do you need to know to do it successfully? This is driving the need for unsupervised deep learning.

The core of machine learning, is combining various aspects of successful design under "Framework and model management."

The increasing need to deal with machine learning models is a natural outgrowth of the big data movement, especially as machine learning provides a powerful way to meet the huge, and until recently, largely under serviced demand for ways to extract value from data at scale.

Retraining, sharing, and updating models while testing and exposing new models that is needed to drive successful machine learning. This can be a single model or an ensemble to manage multiple models.

Machine learning is a mainstream activity for a large and growing number of businesses and research organizations.

**What's the best tool for machine learning?**

Organizations that successfully put machine learning to work generally don't limit themselves to just one Framework, model, and tool.

 Organizations need at least three machine learning packages in their toolbox, and over time as many as needed to pull value from data. The need to model a single or ensemble of algorithms and frameworks to determine best model to use.

**These learning packages need to be:**

 A quick clarity statement - performance in AI is speed to accuracy not just speed.

**F**LEXIBLE: Create new, custom models easily without engaging AI experts or development teams; Camera and VMS vendor agnostic; Live and post event analysis.

**A**CCURATE: Configurable deep learning capability enables reduction in false positives and continuous system improvement over time.

**S**PEED: Optimized GPU-based hardware and advanced algorithms deliver dramatic high performance for workloads such as real-time deep learning, video indexing, automated redaction, and more.

**T**RANSFER: The ability to use algorithms throughout the organizations using Notebooks and frameworks build once use many.

**Project goals**

 In this example we classified images for types of bird (pigeons, turkey or eagles), We need to expand from this focused scope and add the ability to know whether it is a managed bird or wild. If managed was the door open and maybe when the nest is empty.

 The power of machine learning often leads to business change. After you see what you can do, you may look at new ways that machine learning can produce useful results.

 Another example - Look at the next generation farm where hundreds of animals, ground chemistry, and equipment are being continuously monitored by cameras and sensors looking for location, health checks, soil needs, predators, and other events.

 Data scale, drives the need for a variety of Internet of Things (IoT) data sources and locations as well as the need to store and share both raw data and outputs with multiple applications or teams. This is key to driving more insights.

 A common issue for Machine learning is governance not having clean data will result in the potential of bad to horrible decisions.

 People new to machine learning may think of model management, as just a need to assign versions to models, in truth the need for model management can improve accuracy and reduce latency to insights.

 Framework and Model management is a powerful process that deals with large-scale changing data and changing goals, and with ways to deal with models in isolation.

 The value of A.I. and the importance of developing these skills has never been more important. Today companies like IBM have developed frameworks that you plug in your use models and ensembles to drive the most out of your vast repository of data. These tools also reduce the tedious part of cleaning data, developing flows and defining the right algorithm and framework for sets of data.