Using big data for innovation

It's possible that big data analysis can bring very insightful ideas and these ideas give competitive advantage in the markets. Examples:
- Amazon, Google, Farecast, Paychex, ...

New role of innovators - Using big data may change the role of innovators and even who the innovator is. It's getting more important to innovate how to collect, store, organize, analyze and share the data. The innovator might not necessarily be the one "inventing" the product, rather selecting the data sets and analyzing tools through which data mining produces new innovative correlations to base product development.

Challenges for innovation? - New technologies (e.g., storage, computing, and analytical software) and techniques (i.e., new types of analyses) are needed to seize value from big data. Currently ,legacy systems and incompatible standards and formats often halt the integration of data as well as inhibit the use of more sophisticated analytics that create value from big data.

Data analytics might be used as a tool to uncover the value. Data analytics coupled with human insights is useful in generating innovations based on multiple sources of information. One of the important functions of data analytics is a provision of the interface between data and the scientists and engineers who work with these data. The next picture illustrates this interface.

(Erdman et al., 2013, p. 701)
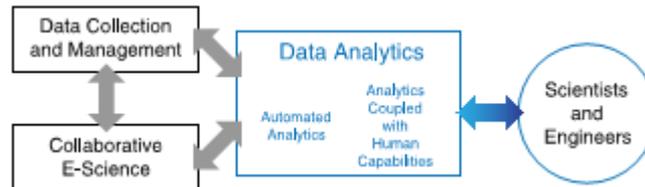
Innovation Objectives Of Big Data

1. To develop and make available to industry and the public sector technology, applications and solutions for the creation of value from Big Data
2. To optimize architectures for real-time analytics of both data at rest and in motion enabling data-driven decision-making on the fly with low latency as well as to improve scalability and processing of data validation and information discovery especially in heterogeneous data sets
3. To drive the integration of the BDV services into private and public decision making systems such as Enterprise Resource Planning and marketing systems for optimising the functioning of existing industries and potentially establishing entirely new business models
4. To validate technologies from a technical and a business perspective within cross-organisational, cross-sector, and cross-lingual innovation environments through early trials
5. To enable European industry, business, public sector and citizens to use and take advantage of value creation from Big Data that is validated with user involvement based on open and private data in secure and privacy respecting environments
6. To integrate advanced visualization of data and analytics for augmented user experience and prepare platforms, technologies and tools for disruptive changes in management of data

European Big Data Value Cppp. Strategic Research and Innovation Agenda, 2014. Web. 24 Mar. 2015.

Enjoying the benefits of Big Data Technology to telecom operators can be used to achieve the three goals:
- Deliver smarter services that generate new revenue sources
- Change in operations to achieve business excellence and service
- Build Smarter Networks (Smarter Network) to guide and enhance the consistency and quality of the customer experience

Some usages of Big Data communication for business success are:
- Pro-active Call Center
- Smarter Campaigns
- Network analytics
- Location-based Services
- Trend based supplying

Literature Sources

Erdman et al. , 2013.Grand Challenge: Applying Regulatory Science and Big Data to Improve Medical Device Innovation. IEEE Transactions on biomedical engineering, Vol.60, NO 3