

Chapter 65

Blending Technology, Human Potential, and Organizational Reality: Managing Big Data Projects in Public Contexts

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ABSTRACT

To make the deeply rooted layers of catalyzing technology and optimized modelling gain their true value for education, healthcare or other public services, it is necessary to prepare well the Big Data environment in which the Big Data will be developed, and integrate elements of it into the project approach. It is by integrating and managing these non-technical aspects of project reality that analytics will be accepted. This will enable data power to infuse the organizational processes and offer ultimately real added value. This chapter will shed light on complementary actions required on different levels. It will be analyzed how this layered effort starts by a good understanding of the different elements that contribute to the definition of an organization's Big Data ecosystem. It will be explained how this interacts with the management of expectations, needs, goals and change. Lastly, a closer look will be given at the importance of portfolio based big picture thinking.

INTRODUCTION

Big Data is an extremely vast field. Big Data can be all about Hadoop, Map Reduce, Tableau, HANA, Nexidia and Stata. Big Data can be all about crunching and capturing regional specificities. It can be all about statistical modelling, tendency plotting and data supporting technological optimization. Big Data can be and is indeed all of this. But it is also much more: it is about elevating an organization to unexplored reflection paths.

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To make the deeply rooted layers of catalyzing technology and optimized modelling gain their true value for education, healthcare or other public services, it is necessary to prepare well the Big Data environment in which the Big Data will be developed, and integrate elements of it into the project approach. It is by integrating and managing these non-technical aspects of project reality that analytics will be accepted. This will enable data power to infuse the organizational processes and offer ultimately real added value.

This chapter will shed light on organizational, human and change management actions required on different levels to maximize the unfolding of the Big Data potential. It will be analyzed how this layered effort starts by a good delineation of the different elements of the organization's Big Data ecosystem. It will be explained how the management of expectations, needs and goals is essential for the fit between the silver lining and the technical realization. Lastly, to ensure feasibility and long term contribution, a closer look will be taken at the importance of the bigger portfolio picture.

All together this chapter will illustrate that managing Big Data projects in a public context can only deliver a solid result if the organizational context and the human reality are embraced together with the technical challenges.

BACKGROUND

In the Big Data definition provided by research and advisory firm Gartner (2014) a strong emphasis is put on technology related aspects and the potential contribution to decision making. As indicated by Kobiels (2013), Big Data players like IBM base themselves on 4 Vs to characterize the key elements of Big Data success: Volume, Variety, Veracity and Velocity.

This tendency to focus on the technical aspects is part of a larger reality where the Big Data potential is put in the perspective of the always moving frontier of technological possibilities. With recent estimates of Turner, Reinsel and Gantz (2014) expecting digital data created by humans and devices to increase between 2012 and 2020 by a 50-fold to almost 40ZB, it seems very unlikely that the attention for technological aspects of Big Data will revert soon.

At the same time, research has indicated repeatedly that the majority of projects focusing on data analytics fail because of non-technical reasons, or because they do not deliver the benefits that are agreed upon at the start of the project (Young, 2003; Gulla, 2012; Van der Meulen & Rivera, 2013). As tools and technology are used by people who are working themselves in an organizational context, this technical IT focus of Big Data endeavors should therefore be complemented with other aspects of the reality.

In that context, paying attention for change on the human level and opening the mind to a new way of thinking are part of the 'soft' factors that play a fundamental role in paving the road to success of Big Data projects. There is namely limited added value to provide a hyper-advanced data cruncher to people that only want to execute the very same daily professional routine, and use the tools they have been using for years. If they are not gradually prepared for this change and don't grasp the potential advantages, there will be no 'real' use of the data tool. If they have the impression that they don't have the means to work efficiently anymore, they risk even to blame Big Data for a disruption of service.

Complementarily, managing data projects means being able to look beyond the most exciting Big Data facets, and taking time for the guiding project backbone. Freewheeling on the most stimulating ideas can namely only result in a concrete and valuable outcome if the efforts are framed, planned and guided towards a final goal.

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