



Practical guide to data imagination with mobility

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Introduction

Big data is a term that is frequently discussed, as data is being produced at a rapid pace. It doesn't matter whether your organization is small or large; data is a concern for all. Data analytics isn't a new concept to organizations. The difference is, the big data characteristics of variety, velocity, and volume change how data questions are conceived and answered.

At the same time, there is a mobility shift occurring. Now, organizations are operating in a new multifaceted environment that is mobile-oriented.

This whitepaper provides context between big data and enterprise mobility and discusses how an organization can visualize new opportunities.

The path to data and mobile convergence

- Mobile Applications – The growth of mobile applications has forced businesses to develop a mobile application strategy. The current process of developing and deploying applications is a mixture of various processes. The application is one of the main interfaces a user has with a business, so there is a lot of hidden value that can be realized by analyzing the application infrastructure and user interactions.
- Mobility Domain - mobility within an enterprise includes a broad set of tasks. Managing devices, applications, networks, users, etc.

adds up quickly. In conjunction, securing a changing attack vector requires personnel capable of managing organization risks. To that extent, mobility presents challenges to management of being proactive versus reactive.

- Internet of Things (IoT)/Industrial Internet of Things (IIoT) - To achieve the efficiencies of all the connected devices, considering the influx of new applications and data, enterprises need a plan. As an organization moves to connecting more devices, the approach around operating in this environment is going to be dynamic.
- Big data – data analytics in a mobile and wireless context presents challenges due to the change in questions. This data will continue to be generated at a fast pace, but it requires a tremendous effort to collect, manage, analyze, and react to it.

Challenges in deriving data value

- Unknown opportunities, due to vagueness about what data is available and what questions to ask
- Structured data still needs to be analyzed, but when it's aggregated with unstructured data, it's a different problem. Searching and analyzing this type of data requires different methodologies.
- Metadata/taxonomy – data can take on a life of its own, depending on

who is analyzing it. Documenting its meaning is important if data is shared with third parties.

- Predictability – Data in your mobile environment includes multiple components that can consistently change the scope of the analytic activities.
- Enterprise mobility - Given the dynamic characteristics of mobility, it's hard to narrow the scope of analysis. The value of data is different inside and outside of an organization.

These challenges create great discussion points, but organizations need to understand their needs and align it with their mobility objectives.

Mobile data objectives

Data imagination is a concept of taking the unknown aspect of mobile data analytics and transforming your organization. This starts with an organization shifting from a silo based approach, where internal groups don't share knowledge, to an organization wide mobile first approach.

Data can come in a variety of forms that include location, asset, security, and so forth. It needs to be mined to really understand what's in it. Knowing that mobile data sets are going to come from all over the place, we believe the primary sources will be in these forms:

1. Internal data sources
2. Public data sources
3. Third party data sources

Knowing the data is everywhere, it's best to start by mapping various inputs that can be ingested into your data analysis. This leads into the development of a framework, showing how you can visualize new opportunities by analyzing data within your enterprise mobility environment by focusing on the following areas:

- Collaboration
- Taxonomy
- Ecosystem
- Agility

Collaboration

With mobility, before you begin analyzing data, start with strategic planning questions, "What are our short-term and long-term goals? Then ask, "How can data from our mobile environment help us?" The collaboration aspect is to align your business initiatives with data analytics. Have a conversation with the leaders within the organization to ensure everyone is on the same page as to how you plan to use the captured data. Data visualization takes data to the next step, by creating a picture of your data. Sharing that picture might put you in a position of seeing unfamiliar competitive advantages, which starts with collaboration.

Taxonomy

The data taxonomy is critical to sharing knowledge within your organization. Your mobile environment will consist, at a minimum, of devices, network, operating systems, applications, and user data. To create a clear understanding of the data, list all the data that is being collected and categorize it by data type.

Then, map the taxonomy to the short-term/long-term goals of the organization. The answers to your questions can change, but the intent of the taxonomy is being able to manage and quickly reference the data, so you can be proactive in seeking answers.

Ecosystem

Data analytics might not contain data just from your organization. There might be public data or other third party data that might be useful to you. This leads to an ecosystem where information is shared. Aggregation of external data to support your short-term and long-term goals is important. Be ready to interact with external ecosystem sooner, rather than later, as they will be a key resource.

Agility

If mobile is central to your initiatives, become agile when it comes to data analytics. Organizations need to understand that answers from a few months ago might not be relevant today. To combat that, continue to leverage the collaboration, taxonomy, and ecosystem to stay ahead. The mistake is thinking that you can be agile all alone. That won't happen in this mobile first environment. People and processes are key inputs to enable agility in this environment.

Use Case	Activity being examined
Mobile application and third party data	Product Development
Extended enterprise threat analysis	Security Posture
Mobile Infrastructure	Environment Health
Employee Engagement	Mobile Investment

Table 1: Sample use cases for mobile insights using this framework

About Us

Infrastructure Solutions International (INFRASI) is an enterprise mobility and wireless solutions company constantly developing new, breakthrough solutions that leverage mobility.

Significance of the data methodology

The value in using the framework is that you leverage the data characteristics of your mobile environment. In thinking about the data in this manner, the analysis becomes strategic and hands-on. With management buy-in on strategic initiatives to meet short-term and long-term goals, we begin to make the change in data analysis from a static to a dynamic data story using visualization.

Mobility decisions going forward

As we begin this journey to understand data in its various forms, mobile data is crucial to analytics. The uniqueness of mobile will put the business in an abnormal position. It's time to establish your methodology now to meet to demands of the future. Any industry that uses "SMART", "Intelligent", or "Connected" to describe its transformation is going to leverage mobile technologies.

Don't make the mistake of adopting technology first without understanding people and process. The technologies will only get you so far. Understand how mobile is used within your organization and then start exploring the possibilities due to the characteristics of anytime and anywhere user access. Not doing this will hinder your ability to take advantage of the connected and data centric future.