The Data Value Chain

Executive Summary
June 2018

Introduction

The volume of data in the world is increasing exponentially. This data revolution is already transforming the world's economies and society. Many organisations, regardless of industry focus, now consider data to be a vital strategic asset and a central source of innovation and economic growth.

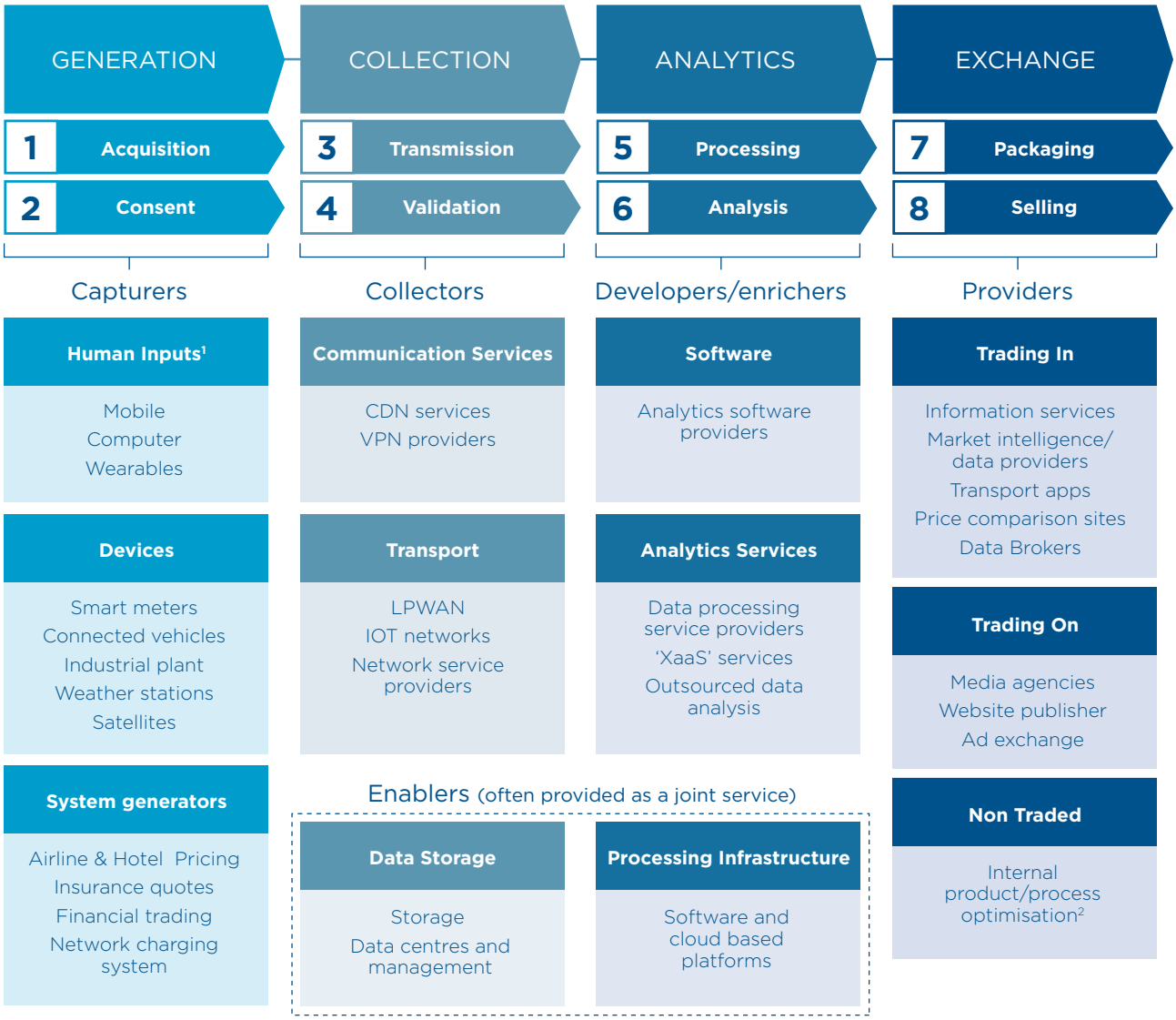
Data has become a new form of asset, one where the combination of individual pieces increases data's intrinsic value by delivering new insights and correlations. In addition, using data does not consume that data: rather it can still be used by others, or built on and reused many times over. Therefore being able to collect and exploit large volumes of data in an efficient manner has become an important source of value.

The aim of the GSMA's Data Value Chain study is to understand the data value chain in terms of the types of data considered, the activities and business models involved in collecting and monetising data, and the potential policy issues arising in the data economy. Additionally the report considers the role that mobile network operators are playing within the value chain and the issues and barriers they face when seeking to develop and offer services in these markets.

The Data Value Chain – Structure and Activities

The business of collecting and exploiting all types of data, whether personal, machine or system generated, can be analysed with reference to a value chain framework. This emerging data value chain consists of several discrete steps:

Data Value Chain structure and activities



1. i.e. a person directly generates data and inputs via mobile, wearbale etc
2. i.e. the organisation collects and analyses data for its own (value-creating) activity only

Source: A.T. Kearney

Within this framework, companies organise themselves in different ways to provide services and create value. In comparison, in a traditional value chain different companies would typically specialise in a limited set of activities and then trade inputs and outputs with other companies. Value is created at each step in the process, from extracting raw material inputs through to developing finished goods and services.

In the data value chain, however, the following are regularly observed:

- **Vertical integration** - The nature of data results in a tightly integrated value chain where the organisation that collects the data is very likely to keep control and ownership of that data through all steps towards developing the final output;
- **Platforms** - A common feature of many internet and data driven businesses is that they are platforms. They act, therefore, as intermediaries that bring together different players in the data value chain;
- **Multiple services and conglomerates** - Companies expand and operate in adjacent or even unrelated areas, either launching new services themselves or acquiring other companies.

The Value of Data

The data value chain is important in almost all industry segments and the value that is generated through the ability of organisations to collect, store and process data is self-evident. The rapid growth of data-driven business models and the anticipated continued growth in automation, digital technologies and artificial intelligence, running on ever more powerful processing and storage infrastructures is a clear sign that this trend will continue.

Our analysis shows that:

- Most "value" in the value chain can be derived from analytics – (i.e. trading on services based on analytics that are underpinned by intellectual property)
- Most "value" in generating and aggregating data accrues to those that can access high-volume, timely data; those that are able to combine different databases; and those that can establish strong trust with their community of users

Policy Implications

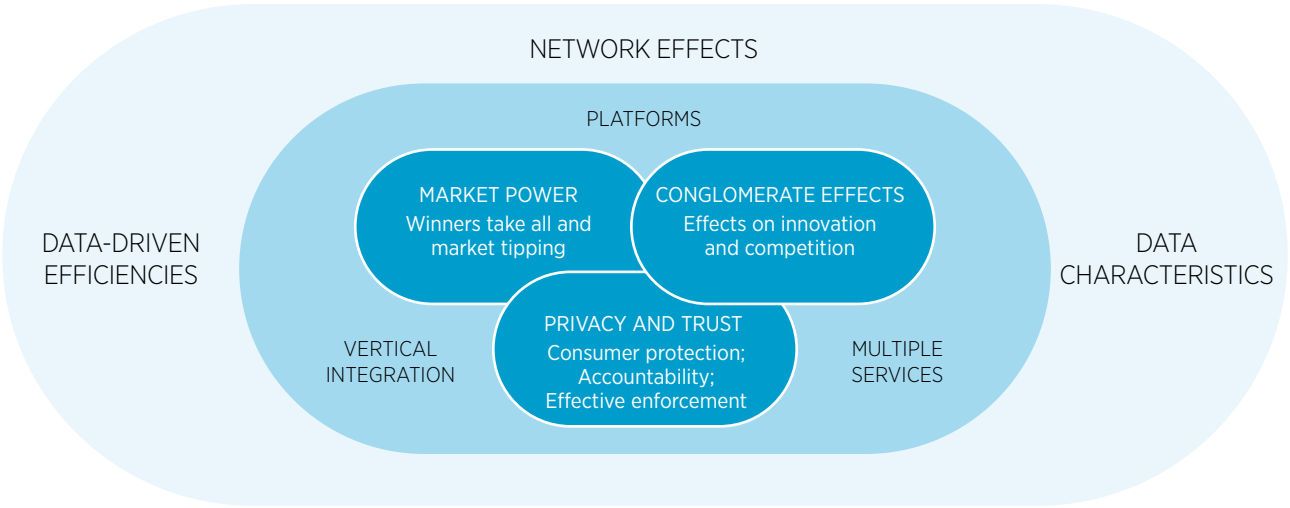
Data-driven businesses currently generate higher returns than traditional businesses. Once collected, data can be used for multiple purposes and cycles of collection and exploitation become self-sustaining. It is important, therefore, that the data value chain works well and delivers competition and innovation.

It is also clear that while the growth of data-driven business models has been strong to date, it has not been without issues. Policymakers are also keen to promote continued competition and an efficient and fair value chain which serves consumer interests.

Policy issues which merit close attention include:

- **Market power, direct and indirect network effects** – how to balance scale, scope and platform advantages with market power (i.e. less competition) and innovation;
- **Conglomerate effects** – how to balance data-driven efficiencies and restriction of competition/innovation;
- **Privacy and trust** – how to ensure the right balance between consumer protection and market forces;
- **Sector-specific rules and geographic restrictions** - many operators consider themselves to be constrained in how they can analyse and trade this potentially valuable data (higher privacy standards, sector-specific regulation, data localisation restrictions).

Key policy issues



Conclusion

Current competition and regulatory approaches may not be suitable for the unique characteristics of data driven businesses. More work is required to adapt the way in which we analyse and assess these types of business models to ensure we can meet a wide set of policy objectives. Any policy regime must ensure that the data value chain continues to thrive as a major driver of economic growth and social progress.

Floor 2, The Walbrook Building, 25 Walbrook, London EC4N 8AF, United Kingdom Tel: +44 (0)20 7356 0600

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