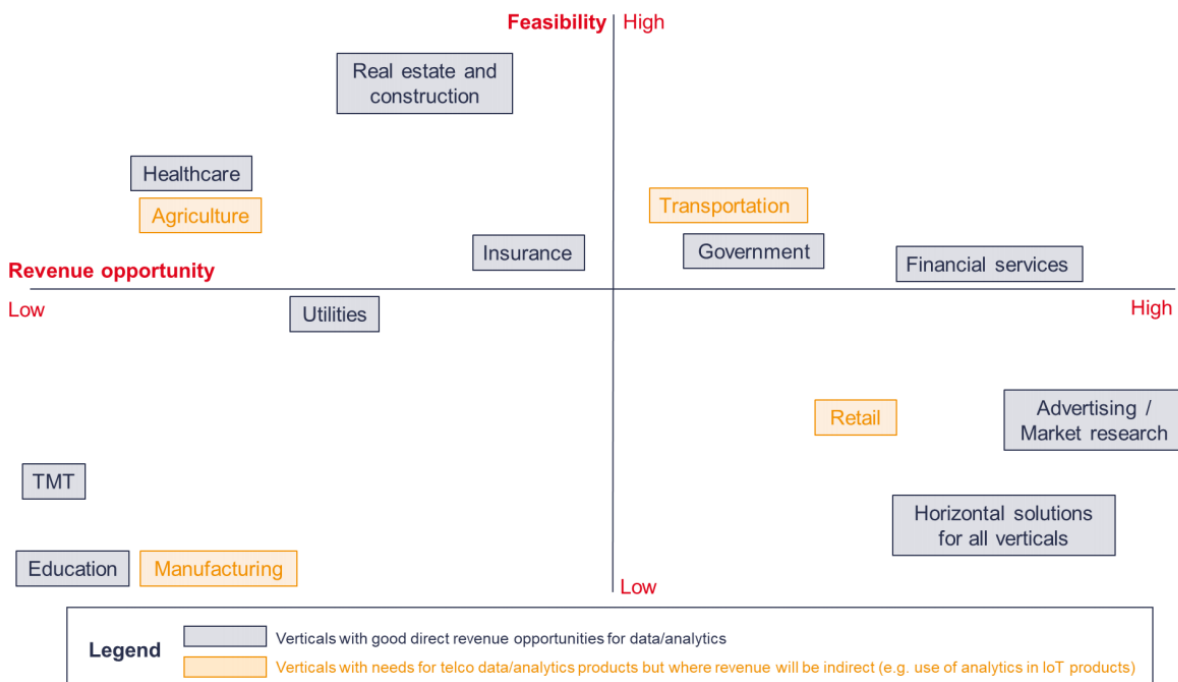




## **Data monetisation in telecoms: 10 use cases**

STL Partners

Relative value and feasibility of telco data products by vertical



Source: STL Partners, Charlotte Patrick Consult

Big data monetisation in telecoms has been an area of activity for the last few years. However, telcos' interest levels have varied over time due to the complexity of delivering and selling such a diverse range of products, as well as highly variable revenue opportunities depending on the vertical. Telcos' appetite to pursue data monetisation strategies has also been heavily impacted by the fortunes of other new telco products, in particular IoT, owing to the link between many telco data and analytics products and IoT solutions. As illustrated in the graphic above, in many sectors IoT data monetisation is the main strategy, while in others telecoms operators can address opportunities independently of IoT services.

We explore the main data monetisation models and use cases across 10 verticals. We break these up into ones where data monetisation strategies are strongly linked to IoT, and those that are more independent.

## IoT data monetisation opportunities

### 1. Agriculture

Most activity in the agriculture sector is seen from large multi-national telcos with mature IoT propositions. Not all the biggest telcos report pursuing such projects, though, with

case studies most likely from those with a strong presence in developing markets, or with large multinational enterprise customers present in developing markets.

Most opportunities are related to IoT and sensors and include a mix of connectivity services with storage and analytics of the payload data. For more complex and specialist the use cases, telcos are much more likely to play a connectivity only role. For example, in crop management, NTT Docomo offers hardware and analytics, but many other telcos instead choose to work with specialist platform vendors.

## 2. Manufacturing

Much of the discussion about future telco activity in this vertical is linked to the provision of 5G services to allow Industry 4.0 capabilities<sup>1</sup>. The most visible telco manufacturing solutions are often linked to historic associations with a particular industry; for example, Vodafone and T-Systems solutions within the automotive industry. Barriers for telcos to overcome include rolling out 5G capabilities fast enough to satisfy manufacturers and enable the swap out of LTE, creation of flexibility in their offerings and ease of access through on demand provisioning etc.

The table suggests that there is very little financial value for data/analytics in the vertical, but this is linked to the prevalence of IoT use cases where data analytics will not be sold as a separate service. It is likely that telcos which choose to focus aggressively on 5G and edge computing for manufacturing are most likely to take advantage of the data/analytics opportunities – predictive maintenance and the provision of analytics for autonomous vehicles on the factory floor look most promising.

Some of the solutions where telcos are most active in manufacturing, such as asset management, supply chain analytics and transportation/logistics solutions, are also provided to other verticals. These are therefore captured in the section considering horizontal solutions for all verticals.

## 3. Retail

Historically, this was one of the first verticals targeted by telcos with customer movement inside products. Developing the products was often hampered by the difficulties of finding the right person in a retail organisation and the likelihood of non-standard requirements from every retail customer. However, among larger telcos with ambitions in data/analytics there is now a reasonably mature retail product set.

Ongoing opportunities divide into three categories:

- **Customer movement insight products:** These tend to be the most feasible project as they are more mature and use telco data, for example for store placement calculations.
- **Customer insight products:** Related projects use customer insight (demographic, sociographic) rather than geolocation data. For example, the open data platform described above could be accessed by retailers, hoteliers or other types of customer in this vertical.
- **IoT/small cell opportunities:** There are additional data/analytics opportunities which use small cell, video and CCTV data to track customers in small spaces or within a shopping mall – however, these are considered of lower feasibility because they require rollouts of these capabilities and potentially IoT related products such as sensors. These opportunities subdivide between those that require specialist analytics and those that require additional AI capabilities such as facial recognition. All of these use cases require a sustained focus on the retail sector and its needs, plus enough rollouts of small cells, wifi, beacons etc to make a business case for adding data/analytics on top.

## 4. Transportation

Like other verticals, most of the most accessible financial opportunity is from customer movement insight provided to passenger transport companies such as trains and buses. This is a reasonably mature use case for telcos. Much of the rest of the opportunity is related to mature fleet management markets where there are limited opportunities for adding data/analytics. Lastly the connected vehicle market provides various potentially feasible opportunities to add data/analytics to IoT deployments.

## Independent data monetisation in telecoms

### 5. Finance

The feasibility of providing services for retail and investment banks and other companies within the financial services sector divides broadly into three categories:

- **Services live today:** anecdotally, location-based card authentication (i.e. alerting a bank when a customer travels to a different country, which improves fraud management) is one of the highest revenue services for telcos today. There are additional services alerting retail banks to potentially fraudulent behaviours, but these seem less popular. Services using customer movement insight such as identification of where to open a bank branch are also popular, although the financial benefit is not seen in the table below as it is categorised with other similar services for other high street retailers.

- **Possible services not yet on the market:** customer movement insight could also be used for optimising the location of bank ATMs and telco data could be added to specialist analytics for operating them, however example services have not yet been seen from telcos, so it is possible that there is limited demand.
- **Specialist services:** data and analytics services on high speed, complex customer and market data which offer less attractive opportunities for telco services, but is not completely infeasible. For example, there are cases of telcos adding customer movement insight data to improve bank trading decisions and risk management. There are also examples of telcos, such as CenturyLink, who have purchased analytics companies because they host financial data, although it is not clear how much financial return this has delivered for them.

## 6. Insurance

Insurers use external data for risk management, actuarial calculation and underwriting decisions. There are compelling reasons for insurers to include new data sources, however, there are regulatory restrictions (as companies need data on individuals) and it needs to be verifiable and up to date. There has been very little telco activity in this field – except for the odd anecdotal data point that they may be working with specialist actuarial consultancies. The financial value ascribed to the provision of data is therefore mostly for niche products that do not need PII, while likelihood scores are low as the limited opportunity means a reduced sales focus for operators.

One area of insurance where there has been strong telco involvement is in telematics products for insurers, including usage-based insurance. Analytics create driver scores for pricing and risk management purposes. Tier 1 telcos including Verizon, Telefónica, Telstra and Orange have data monetisation products in this area – some create the analytics themselves while others partner.

## 7. Healthcare

Building new revenues in the healthcare vertical requires telcos to have a long-term strategy and a real understanding of the sector. From a data and analytics perspective, nearly all telco activities include the transport and storage of data. However, they also then require a mix of specific platforms, applications and smart devices dependent on the use case, which potentially offer the opportunity for addition of A3 (automation, analytics and AI). As the market matures, different strategies are seen towards investment (build or buy) up the value chain which allow telcos to develop A3 capabilities.

The opportunities divide into various categories:



- **Telemedicine** use cases provide smart devices which generate payload data. The data requires transportation and storage, also providing opportunities for development of analytics to generate alerts or provide historical trends.
- **The management of electronic health records**, medical images, electronic prescriptions and insurance claims. These require data transport, storage and then specific platforms for exchanging information between different parties.
- **Solutions for the pharmaceutical and life science industries** including collaboration platforms for clinical trials.

## 8. Real estate and construction

This vertical offers a number of opportunities for customer movement insight products. Anecdotally, deal sizes are smaller than in, say, retail, although location mapping is useful for a variety of purposes. Use cases require a good deal of external data and open data from government platforms to be successful.

Potential opportunities include:

- Use of customer movement insight to understand demographics, behaviours and requirements of a local community to improve development and investment decisions for both retail and commercial real estate companies
- Use of the data for pricing, marketing and sales decisions within estate agents and brokers
- Use of indoor data from small cell deployments within shopping malls to understand customer movement in order to position advertising, adapt opening hours according to foot traffic and change layouts to drive traffic to, say, food courts.

## 9. Telecom, media and technology

Provision of insight to entertainment/sporting venues is a relatively common use case today that uses customer movement insight and sensor data. There is also opportunity for analytics such as customer segmentation and behaviour. Projects telcos have reported participating in tend to include a significant consulting component, so this is best suited to operators with a consultancy team.

Other opportunities around content consumption patterns are more difficult for telcos. Telcos may well have insight from their set-top boxes and other platforms that will be of interest to content providers, but it is a mature market which is used to ingesting different types of data and it does not seem a popular use case.

## 10. Utilities

This market is split between products for consumers which seem to be increasingly hard for telcos to deliver, A review of telco websites suggests that, except for a couple of exceptions, most have retreated away from a variety of smart home products towards a focus on security. (STL has previously argued that the smart home in itself is not a viable product, but rather that telcos should focus on solving specific issues for households, such as security, entertainment, or energy efficiency. See STL report [Can telcos create a compelling smart home?](#))

Products for the utilities themselves are mature and larger telcos have been successful. Telcos offer a range of monitoring and management capabilities for the grid and smart meters, with additional products including security, communication networking solutions, drone management and fleet management. There are three main categories of products in which customer movement insight data could be included alongside analytical solution using IoT payload data:

- **Grid distribution, monitoring and control:** the largest telcos offer descriptive and diagnostic analytics on data about electricity, water and gas networks. 5G will offer new opportunities for real-time prescriptive activity using digital twins. Meanwhile, shifting the energy market from fossil fuels to renewables will require matching demand to supply (when the sun shines and the wind blows), as opposed to the current environment of matching supply to demand whenever it occurs, which will in turn require very advanced analytics and automation across all levels of the energy market.
- **Smart metering control and management:** currently a mature market, with opportunities to add prescriptive analytics that enable better management of problems. This area will also evolve significantly over the coming decades towards smart “just in time” energy usage in homes and businesses.
- **Site and network planning:** Opportunities for customer movement insight data to be added to give information about the population to enable new installations (pylons, sub-stations, water facilities, green-energy installations etc).

For more information, check our report [Telco data monetisation: What's it worth?](#).

## How STL Partners Enterprise Research can support you

To be trusted partners for enterprises, telecoms operators' services must be easy to integrate into enterprises' processes and deliver tangible outcomes.

Our research provides insights into how enterprises in different verticals are leveraging new technologies such as 5G, AI, IoT and cloud to solve critical operational needs, as well as key strategies and partnership models telecoms operators are leveraging to address these needs.

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