

Use of data in the context of IoT - Master thesis UCL

This survey is meant to provide the survey leaders with insight information about the roles, activities and data analytics performed by companies using or offering IoT solutions. More particularly it aims at providing a clearer understanding of how they manage to deal with the amount of data they collect from their IoT devices or other partners of their network. Survey leaders want to understand what those data are used for, what are the main challenges that make it difficult to draw the most out of them, and how they can bring additional value to the value proposition of the interviewed firms.

*Data collected in this survey will remain strictly confidential and will only be used for scientific purposes.

*Obligatoire

1. Adresse e-mail *

2. Please enter the name of your company? *

Company insights

The questions contained in this section aim at providing the survey leaders with more insights on your company's reality.

3. What industry is your company active in? *

Select all right answers

Plusieurs réponses possibles.

- Health Care
- Financial / Insurance
- Automotive
- Food & Beverages
- Energy
- Agriculture
- Retail
- Autre : _____

4. What is your company's annual global revenue in Euro? *

Select an answer among the following choices (M = million)

Une seule réponse possible.

- < €2M
- €2M to €10M
- €10M to €50M
- €50M to €500M
- €500M <

Figure 6.2: Survey questions: Part 1

5. What service/product does your company provide? *

Provide a short description

6. Is your service/product already commercialized? *

Une seule réponse possible.

Yes

No

7. In what region is your company active? *

Select all right answers

Plusieurs réponses possibles.

North America

South America

Europe

Asia

Oceania

Africa

Autre : _____

8. How long have you been implementing IoT solutions into your business processes or are you active in the IoT sector? *

Une seule réponse possible.

<3 months

3 to 6 months

6 to 12 months

1 to 2 years

2 years <

9. What is(are) the role(s) your firm plays in the IOT network/ecosystem it is part of? *

Select all right answers

Plusieurs réponses possibles.

Data presenter (User interface provider)

Insight provider (Analytical expertise provider)

Platform owner (Development environment, Cloud, API's)

Data aggregator (Data normalization service)

Data producers (IoT device constructor)

Autre : _____

Figure 6.3: Survey questions: Part 2

10. What is the stage of the Business lifecycle curve of your company? **Une seule réponse possible.*

- Start / introduction (Development stage of the product but not yet commercialized)
- Growth (Early start of the commercialisation of the product or service)
- Expansion (Rapid increase of the level of sales)
- Maturity (Stability of the sales and moderate or null growth)
- Decline (Decrease of the sales level)
- Autre : _____

Data management

The questions contained in this section aim at providing the survey leaders with more insights on the use made by your company of the data it collects.

11. What quantity of data do you collect and manage annually? *

Provide an estimation if you can.

12. What percentage of all the collected data do you actually use in your data analyses? **Une seule réponse possible.*

- < 10%
- 10% to 20%
- 20% to 50%
- 50% <

13. What annual budget, in Euro, does your company allocate to data management? (storage, analysis, employee training, ...) *

Please provide a range if you do not know the exact amount but no percentages.

14. To what percentage of the global budget does that amount correspond? **Une seule réponse possible.*

- < 10%
- 10% to 20%
- 20% to 30%
- 30% to 40%
- 40% <

Figure 6.4: Survey questions: Part 3

15. What internal use does your company make of those data? *

Select all right answers

Plusieurs réponses possibles.

- Business processes improvements (eg: evolution of the business model, cost reduction,...)
- Product improvement
- Detection of new business opportunities
- Customer experience improvement
- Target marketing and CRM management
- Operations monitoring (supply chain, production, etc...)
- Energy monitoring
- Autre : _____

16. Can you provide a concrete example? *

Based on previous question.

17. What external use does your company make of those data? *

Select all right answers

Plusieurs réponses possibles.

- Sharing them among its network (collaborators, customers, supplier etc.)
- Selling them to other companies
- None of the above
- Autre : _____

18. Can you provide a concrete example? *

Based on previous question

19. How would you qualify the access of your company to the data of collaborators in the IoT network it is part of? *

Think of collaborators as suppliers, service providers, platform providers, other companies from the same industry but active in another market etc...

Une seule réponse possible.

- Inexistent
- Very restricted
- Good collaboration and data sharing among the network
- Full access

Figure 6.5: Survey questions: Part 4

Competitive advantages and Challenges

The questions contained in this section aim at providing the survey leaders with more insights on the benefits drawn from the collected data, as well as on the challenges that your company faces to leverage the latter.

20. What is the biggest competitive advantage your company retrieves from the integration of IoT solutions? *

Describe as clearly as possible

21. What are the new opportunities that IoT solutions have brought to your company? *

22. Do you notice an improvement of your customer loyalty since you integrated IoT solutions in your operations? *

Une seule réponse possible.

- Yes, a lot
- Slightly
- Not at all

23. Do you notice an effective reduction of your costs since you integrated IoT solutions in your operations? *

Une seule réponse possible.

- Yes, a lot
- Slightly
- Not at all

24. Do you notice an increase in the development rate of your products/services since you integrated IoT solutions in your operations? *

Une seule réponse possible.

- Yes, a lot
- Slightly
- Not at all

Figure 6.6: Survey questions: Part 5

25. **What is the biggest hindrance your company has to face in order to leverage all the value out of the collected data? ***

Provide another challenge if no answer matches your experience.

Une seule réponse possible.

- Lack of data science expertise
- Data privacy & security issues
- Customers reluctance to data sharing
- Customer low awareness of IoT applications
- Lack of resources & budget
- Too few data to draw valuable data analyses
- Lack of standardisation and communication protocols
- Autre : _____

Figure 6.7: Survey questions: Part 6