



DATOM

a step-by-step guide to creating data-driven business projects for managers

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 **ExpData Press**

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Saint-Etienne

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by Guillaume Lecuyer and Clément Levallois

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Published by Peecho, Rokin 75-5, 1012KL Amsterdam, Netherlands

April 2018: first edition

Revision history for the first release:

2018-04-14: first release

From the same authors:

Levallois, C. et al, eds. (2015). *Twitter for Research*. Ecully: EMLYON Press.

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Preface

A guide for managers

The target reader for this book is a manager who needs to act on the imperative to "create value with data" in their organization:

- Comex members in charge of deploying the strategic vision of the CEO
- Directors of business units and functional teams who must translate the directions of the Comex into concrete business projects and perspectives for development

DATOM is a step-by-step method guiding managers from a stated strategic vision to plans for action for projects with a data-centric logic.

Benefits of the method

- Create business projects aligned with the strategic objectives of the organisation
- With precise instructions on how to include a data driven logic in the value creation process
- Graphical method, suitable for individual and team work

Chapter 1. The DATOM method

Step 1: Restating the strategic objectives of the organisation

What you accomplish at this step

Designing a business project can lead to results of great interest, except that it does not fit with the goals of the organisation.

In step 1, we help you state what are the goals of your organisation, so that it becomes clear what type of project will contribute to these goals. We call these goals “strategic objectives”.

The strategic objectives of an organisation are the key guiding principles defined by its executives. They define the priorities an organisation must concentrate on to accomplish its vision.

How to identify the strategic objectives of your organisation?

→ They are typically openly stated by the CEO or top management of your organisation.

Canvas #01

Designed by: _____

Strategic objectives of the organisation

Date: _____

"In 5 years time, **we must be the leader of**..... **to**"

"By providing

Which translates into these 3 strategic objectives:

#1

#2

#3

Or, in your own words:

.....

.....

.....

...

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Figure 1. Canvas #1 - Restating the strategic objectives

Step 2: Identifying the target user

What you accomplish at this step

Leveraging data to create new products or services can obviously benefit your clients - but that is just one possible target user. This canvas helps you consider other possible targets:

- Headquarters / Corporate / Support functions. Accounting, finance, corporate communication... could your project serve their needs?
- Production: through optimization of costs and time, can your project make a positive impact on production?
- Customers: the current end users of your organization. Would a data-enhanced product or service be beneficial to them?
- New markets: can you aim at developing on new markets thanks to a new data-driven product or service?

Canvas #02

Identifying the target

Designed by: _____

Date: _____



Headquarters /
Corporate / Support
functions

Name of the target department / user / segment:



Production

Name of the target department / user / segment:



Customers /
users

Name of the target department / user / segment:



New markets

Name of the target department / user / segment:

Figure 2. Canvas #2 - Identifying the target user of the project

Step 3: Profiling the avatar of the target user

What you accomplish at this step

Once you have defined the target user you want to serve (see previous canvas), this new canvas helps you get a more precise idea of who this target is.

Canvas #3:

Designed by: _____

Profiling the target user with an avatar

Date: _____



Name of the Avatar: _____

Socio demographic attributes

Age: _____

Gender: _____

Marital status: _____

Number of kids: _____

Occupation: _____

Monthly income: _____

Country & city of residence: _____

Highest degree: high school / univ / other: _____

Lifestyle

Level of fitness: weak /
average / fit / competitive

Social life: none / occasional /
regular / party animal

Societal involvement: none /
occasional / regular / leader

Media and cultural preferences

The last book they read: _____

Preferred extra professional activity: _____

Their preferred TV show: _____

The social media they visit daily: Facebook / Instagram /
Snapchat / LinkedIn / Twitter / Youtube

The last movie they went to: _____

Figure 3. Canvas #3 - Detailing the target user with an avatar

Step 4: Mapping the needs of the target user

What you accomplish at this step

The identity of the target user of your project is now well defined. At this step, we define the needs of this user:

- what tasks are they trying to accomplish in the normal course of their activity?
- what are their pains - the obstacles slowing them down or hurting them in some sense, when they accomplish their tasks?
- what are their aspirations? - the wishes they express, which ideally would help them accomplish their tasks in better conditions?

Canvas #04

Customer needs analysis

Designed by: _____

Date: _____



<p>What resource do they need to perform their task?</p>		<p>What do they need to deliver?</p>
<p>What frustrations do they experience?</p>		
<p>What constraints do they face? (time? budget? distance? legal? etc.)</p>		<p>What rewards do they expect from it? (mention KPIs if relevant)</p>

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Figure 4. Canvas #4 - Mapping the needs of the target user

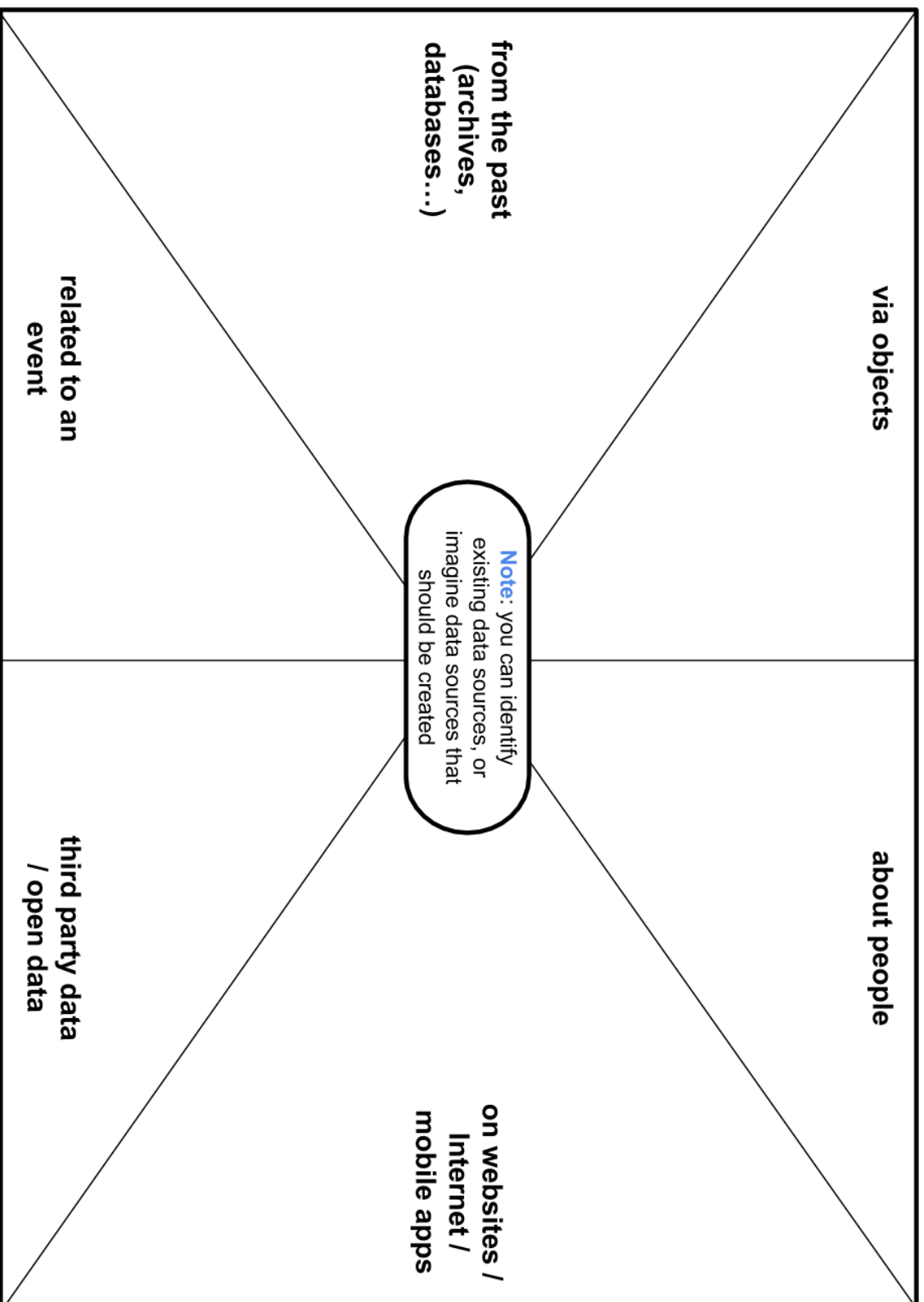
Step 5: Listing the data sources available

What you accomplish at this step

We enter now the stage where we are going to design a project, in response to the needs of the target user. With this canvas, we are listing all possible sources of data which could play a role in our product or service. No need yet to be specific or definitive. Just list as many datasets which *could* be of interest. These datasets can be available in your organization but you can also list datasets which your organization would need to acquire or generate.

Canvas #05 Sources of data

Designed by: _____
Date: _____



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Figure 5. Canvas #5 - Ideation on potential data sources

Step 6: Selecting up to 3 data sources

What you accomplish at this step

Now that you have listed the data sources at your disposition, the next step consists in identifying those that will provide the highest value at the lowest cost. This canvas helps you rank your data sources along key dimensions like machine readability, data completion, etc.

How to use the canvas

Select the 3 data sets which you think will provide most value for your project, and for each dataset, give a grade between 1 and 5: 1 being the hardest and 5 the easiest for the following dimensions.

1. Machine readable: data that exists in a database or a comma-separated value (.csv) file is easier to read than if it is stored in a Word document or a .pdf.
2. Structured or not: Free text is harder to use than structured data stored in a database
3. Follows universal categories or is company-specific: data that follows standard categorization, like the ones provided by national and international statistics organizations (e.g. Eurostat) is easier to analyze than if the categorization is specific to your company
4. Time series: data that is collected regularly across time will provide better results in the long term than punctual data
5. Personal and sensitive data: The more personal and sensitive data is, the more constraints it generates (GDPR, etc.), and therefore the harder it is to use
6. Complete: the more complete the data, the easier it is to use

→ sum up the grades at the last line of the table. Higher scores show which dataset is going to be comparatively easier to manage in your project.

Canvas #06

Details of datasets

Designed by: _____
Date: _____

BONUS POINTS 1 to 5 (1 = hard, 5 = easy)	Explanations	Dataset 1:	Dataset 2:	Dataset 3:
Machine readable?	<i>if the data is a .docx or pdf file, software can't read it. A database or even a csv file is better.</i>			
Structured or not?	<i>if the dataset is "Excel like" then it is quite structured. Free text, web pages or pictures are typically very unstructured.</i>			
Follows universal categories or is it firm specific?	<i>a dataset following INSEE or Eurostat categories is quite universal.</i>			
Time series?	<i>is the data collected several times across months or years?</i>			
Personal and sensitive data?	<i>Personal data comes with more constraints. Sensitive data even more.</i>			
Complete?	<i>No missing records, years, values, and no errors.</i>			
Total: sum of points per dataset	<i>Add up the points to get a total. A higher total shows a more favorable dataset</i>			

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Figure 6. Canvas #6 - Detailing up to 3 data sources

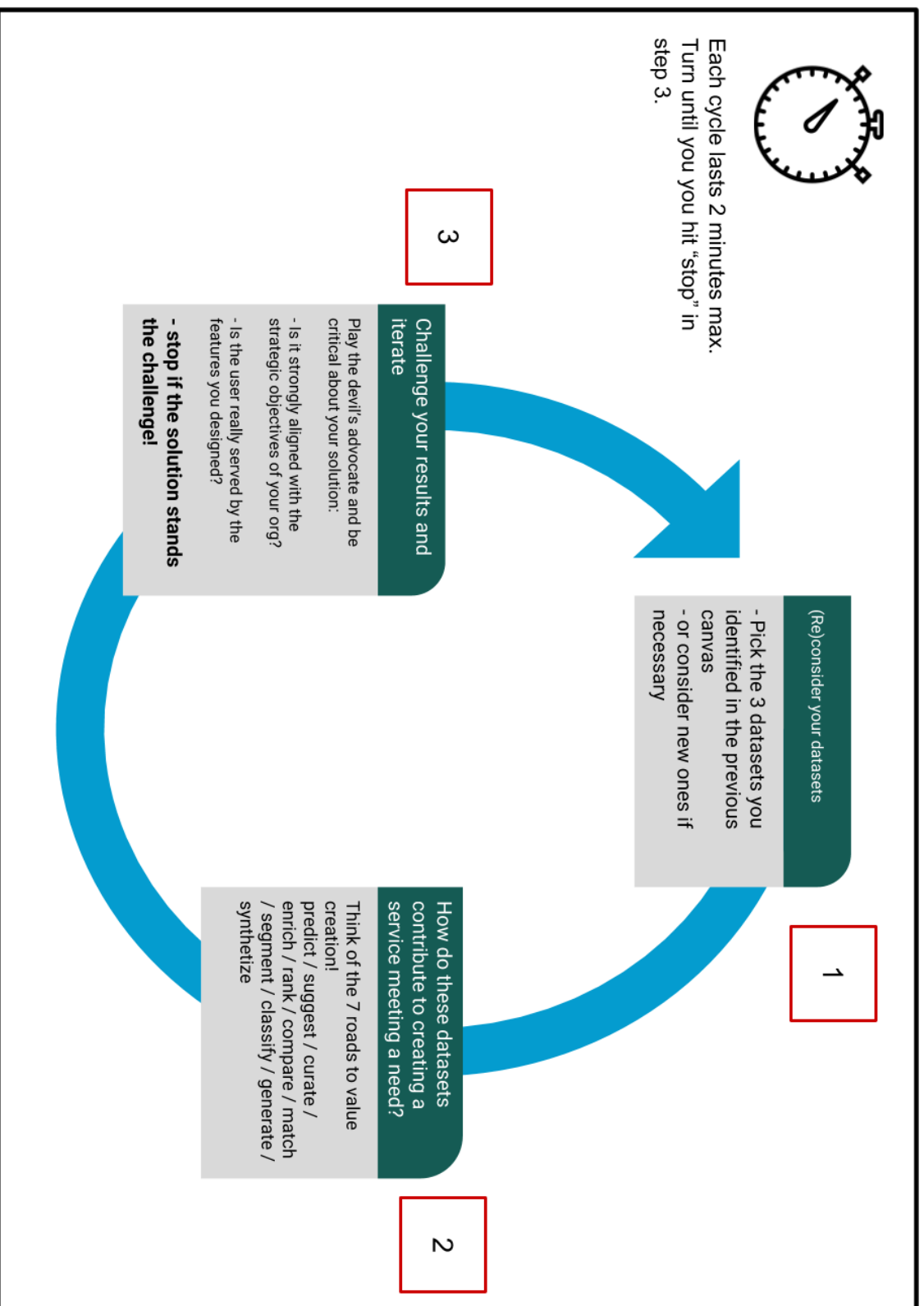
Step 7: Brainstorming on data x the need of the target user

What you accomplish at this step

In this step, you will put the datasets you have selected to the test: do they really contribute to providing a service meeting the needs of your target user? Is the solution still aligned with your company's strategic objectives ? === How to use the canvas Follow this iterative process: Pick one of the datasets Define how the selected dataset contributes to a service meeting the needs of your target users Challenge the results: Is the solution still aligned with your company's strategic objectives ? Is the user really gaining value from the solution ? If the dataset stands the challenge, you can keep it and move on to the next one. If it doesn't, discard it and replace it.

Canvas #07 Aid to brainstorming

Designed by: _____
Date: _____



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Figure 7. Canvas #7 - Brainstorming on data x target user needs

Step 8: Formalizing the value proposition

What you accomplish at this step

In this step, you will summarize the value proposition of the solution you have identified, based on the datasets you have selected. The objective is to list the key features of the solution, as well as describe how it helps solve the target user's problems and how it creates value for the target user.

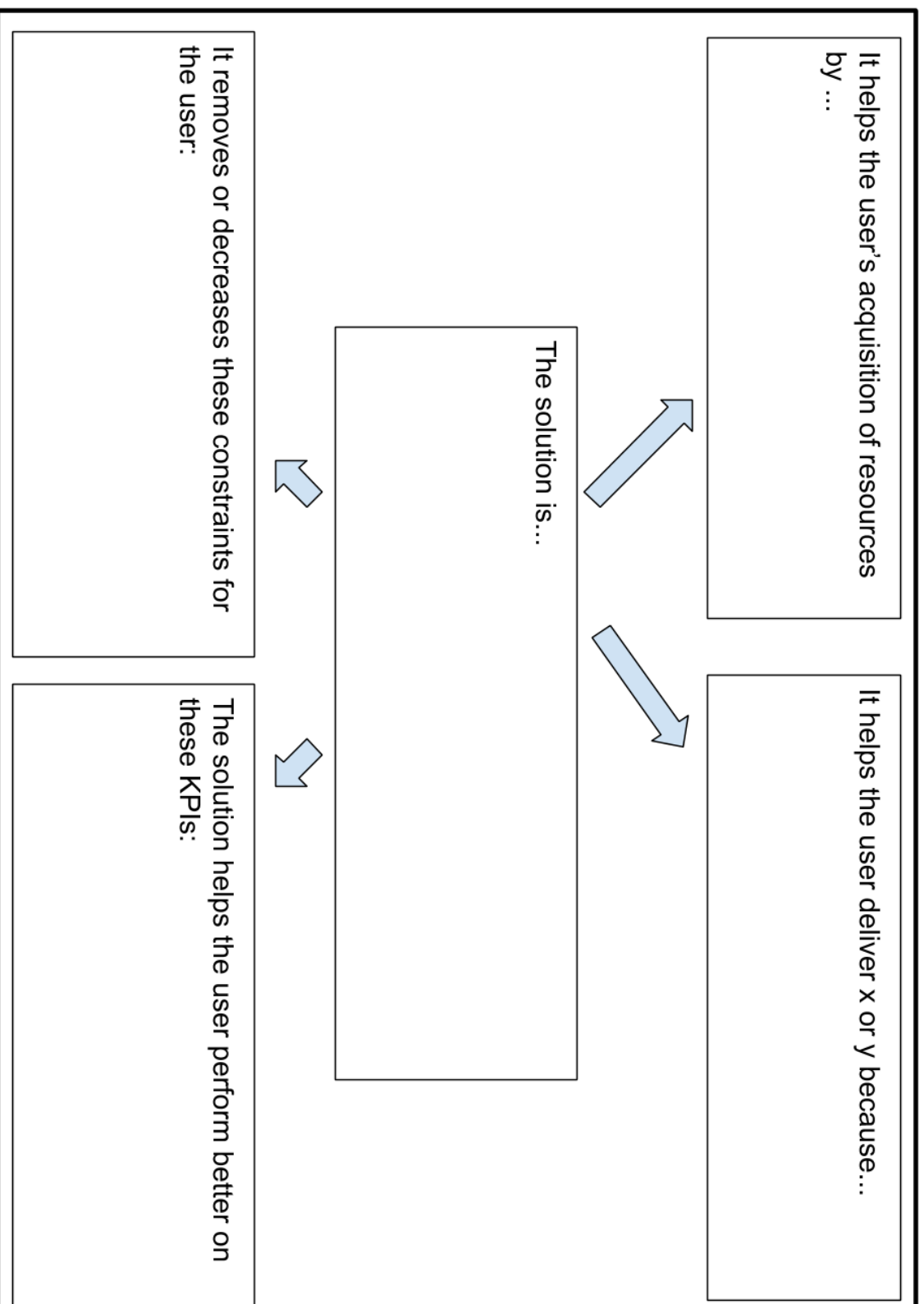
How to use the canvas

The canvas is split in five areas:

- todo
- todo
- todo
- todo
- todo

Canvas #08 Value map

Designed by: _____
Date: _____



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Figure 8. Canvas #8 - Formalizing the value proposition

Step 9: Graphical synthesis

What you accomplish at this step

This canvas helps you synthesize in a graphical manner the strengths and weaknesses of your project.

How to use the canvas

Most of the dimensions on the graph are already familiar. Some need an explanation:

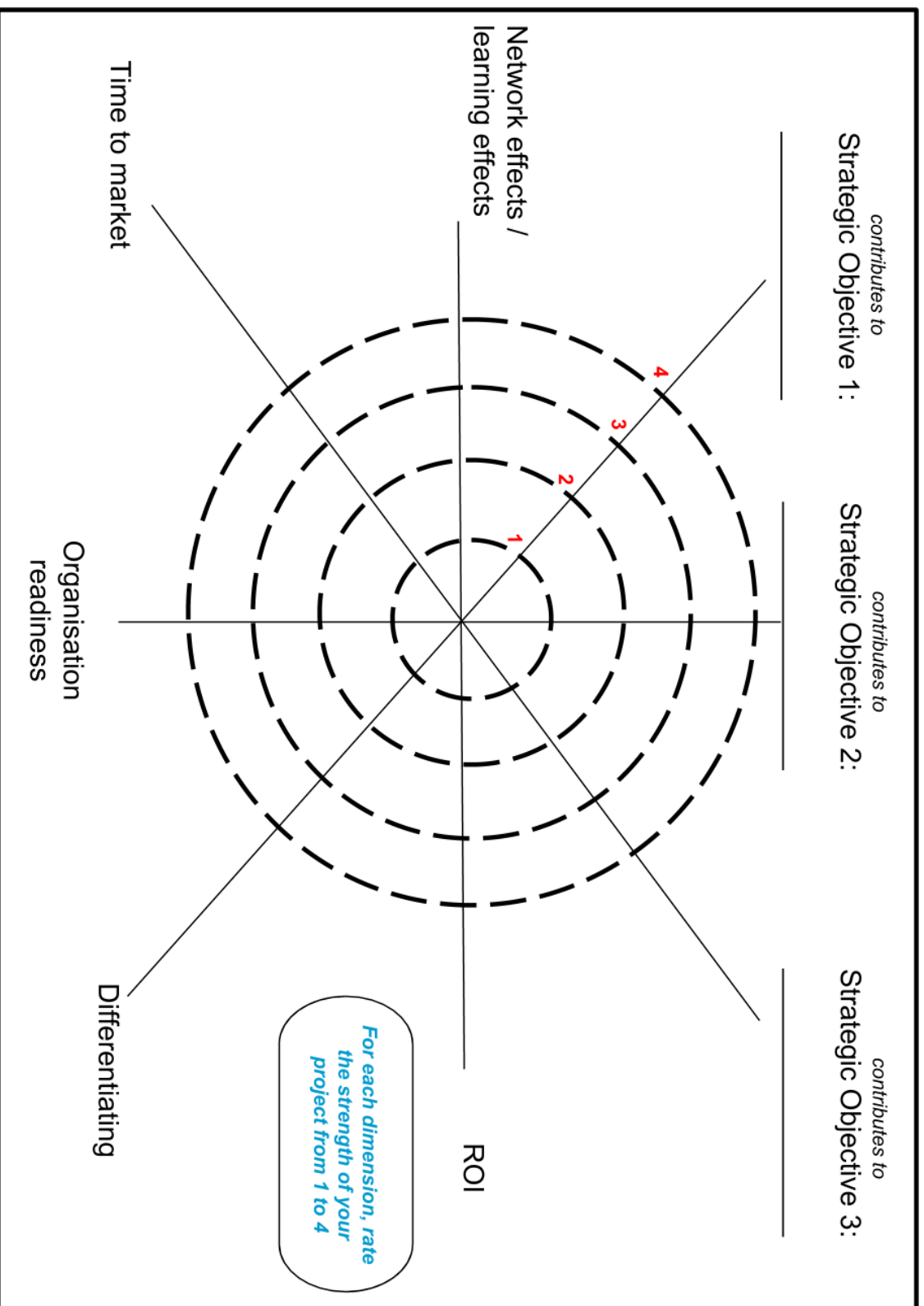
- organization readiness: is your organization well equipped to conduct the project you just designed? In other words, is your project perfect... but can your organization do it, given its resources, organization culture, etc?
- network and learning effects: some products or services bring some great additional benefits. Network effects mean that once your product has many users, it becomes harder for your competitors to launch a rival. Think Facebook: it would be hard today to launch a competitor, just because network effects favor Facebook so much. Learning effects refer to the products or services which improve in performance, the more they are used. Think Google Translate: the more people use it and give feedback on translations, the better the performance.

Canvas #08

Graphical synthesis

Designed by: _____

Date: _____



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Figure 9. Canvas #9 - Synthesis - in a visual format

Step 10: Memo synthesis

What you accomplish at this step

This canvas helps you synthesize your project as a short memo sheet.

Canvas #09
Graphical synthesis

Designed by: _____

Date: _____

Synthesis	
Name of the organization	Name of the idea
Target users and their needs / problems to solve	
Description of the idea	
How does it match the strategic priorities of the org	
Datasets / data sources contributing to the idea	
Expected benefits	

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Figure 10. Canvas #10 - Synthesis - as a written memo

References

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ABOUT THE AUTHORS

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A concise and visual method to go develop business projects aligned with the strategic priorities of the organization.

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