C-K
Reinventing anything
DREAMING OF CREATING A REVOLUTIONARY PRODUCT OR SERVICE?

All you need is THE right method.

Discover the C-K method step-by-step!

What is C-K?

C-K is a tool for thinking differently, to create new things. C-K can be used to rethink a product (e.g. a plane), a service (e.g. banking), a process (e.g. the manufacturing of car) or even an industry (e.g. transportation).

For whom and what for?

C-K may apply on different levels of the company. It can be used:

- at strategy level to build an ambitious innovation programme and stay ahead of competition.
- by a project leader to manage his project efficiently and make it more innovative
- by an engineer to come up with innovative solutions

And even by start-ups to disrupt an industry or anticipate its next pivots.

Each of these C-K applications requires careful steering and advanced expertise.

With this booklet, you can experience the potential of C-K through a series of practical exercises, focusing on a simple example.
C-K: how does it work?

C-K reconciles two approaches that have long been opposed, creativity and science. C-K works with two spaces, the Concept Space and the Knowledge Space.

Choose the product or service you want to reinvent and follow the guide!

This is where we will work on your product/service to reinvent it.

This is where we will identify the knowledge needed to reinvent it.
Describe the product or service you want to reinvent

Take a sheet of paper and list your answers to the following questions regarding your product/service. (multiple answers possible)

The umbrella will be our case study throughout this booklet.

What is this object used for?
If you removed it, what would happen?
What does that tell you about its value?
"it avoids getting wet"

How is it used?
When, how often and where is it used?
"it is used on a regular basis"

Who uses it?

Why is it used this way?
"it is used on a regular basis"

How is it marketed?
Is it sold? Rented? Given for free?
At what price? To whom? Where?
"it is sold to the user"

What does it interact with?
What factors/elements interact with it?
Without what would it not work or make sense?
"it is used for outside journeys" (if we did not need to travel outside, the umbrella would not exist)

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How is it marketed?
Is it sold? Rented? Given for free?
At what price? To whom? Where?
"it is sold to the user"
KEEP IN MIND

This initial description is essential as it will impact the way you will disrupt your product or service. The aim is to cover all characteristics of your product/service: if one of these characteristics is discarded now, it will not then be challenged later on.
Represent your product or service with C-K

For the description of your product/service to be actionable, follow the indications below and represent it using C-K.

1. Selection
Select the most representative characteristic in each category, from your previous answers in Step 1.

2. Representation
Rephrase your 5 characteristics in short sentences, and present them in separate boxes.

Value
“it avoids getting wet”

Use
“it is used on a regular basis”

Business model
“it is sold to the user”

Interaction
“it is used for outside journeys”

Operating
“it is made of a standard waterproof canvas”

Draw your C-K tree in the centre while living space to the right.
KEEP IN MIND

Represent your product/service in this format will help you challenge its characteristics one by one, in a systematic way. The more detailed the description of your product/service, the greater the chance of developing disruptive solutions.
Representing your product/service using C-K will help you identify disruptive concepts to reinvent your product/service. To get started, use the simple mechanisms below.

1. **What else?**

   For each characteristic, ask yourself “What if it were different?” and add the new concept, aligned to the right.

   **Example**
   What if it were not “sold”, but instead...

2. **With or without?**

   Find the opposite of each characteristic and write it down next to it.

   **Example**
   What if there were no “canvas”?...
KEEP IN MIND

Every time you challenge a characteristic of your product/service, you generate a potential concept to reivent it.
To convert your concepts into concrete solutions, you need to use new knowledge outside the sphere of your product/service.

Explore your new concepts

K-space
To help identify concrete solutions, list products or services you know which share the same characteristics:
Outside the world of the umbrella, what do I know that helps dry the user when wet?

- hand dryer
- disposable lenses
- public lavatories
- free newspapers
- teleworking
- covered walkways, tunnels
- convertible cars (that get dark when exposed to the sun)

Draw the K-space to the far right.
KEEP IN MIND

Using knowledge from the current world of your product/service will only generate existing solutions. To create innovative solutions, you have to identify and use new knowledge, outside the world of your product/service.
Refine your solutions

You have enough solutions? Perfect, let’s move forward!

1. Technologies needed

What would enable people to transit under covered walkways? Canopies?
Why not. But this would mean providing the busiest streets with ad hoc infrastructures: nothing really new here!

Let’s have a look at another option: using the existing infrastructure only.

We could imagine a GPS-type application, that would indicate to pedestrians the “itinerary with the least rain” highlighting covered walkways (storefront, shelters...). It would a “virtual umbrella” application!

To go further, we could look at Google Maps or Citymapper to understand how they design their maps in order to duplicate their approach.

2. Related business model

Let’s continue with this idea of the “virtual umbrella” app.

To deal with this aspect, we should first learn about the business models used by mobile applications like Waze (collaborative GPS). These applications use geolocated ads to market their services and provide them for free.

Example for the “virtual umbrella” app
- Canopy retailers, who could target non-equipped shops more easily.
- Shops owners, who have a strong interest in being on the “itinerary with the least rain” used by potential customers.

3. Benefits of the solution

Now let’s try to imagine at least one actor who would benefit from this solution (the user, the company, a third party, the environment...).

Example
Selected solution: « enables people to transit under covered walkways »
KEEP IN MIND

The solutions suggested here are supposedly very new and you will not necessarily have the adequate expertise to design them. It is thus imperative to identify and fill your current gaps in knowledge. Otherwise, you will systematically land back on traditional solutions.
1. On your mark...

List the major risks that may threaten the success of your product/service.

Example for the “virtual umbrella” app

Market risks
- Pedestrians are not willing to change their itinerary according to the weather.
- There are not enough users to market the ads and thus provide the app for free.

Technical risks
- There are not enough covered walkways to draw an “itinerary with the least rain”.
- The covered walkways are too difficult to identify/map.

2. Get set...

Select the most threatening risk:

Pedestrians are not willing to change their itinerary according to the weather.

This is the most important risk because if it were the case, there would be no point in building such an application!

3. Test!

How could we assess this risk quickly and at the lowest cost?

We could identify a popular itinerary used by pedestrians, and, on a rainy day, paint a line on the ground indicating the “least rain itinerary”...

… and then observe how many pedestrians effectively follow the line.

Test your solutions

At this stage, it is very tempting to launch the solution you chose... Not so fast!
At this stage, you do not have the sufficient knowledge to assess the potential of your solutions by yourself. You need to test them. The idea is to carry out cost effective experimentation to fill knowledge gaps quickly and thus identify the most promising solutions.
**IN SHORT**

1. **DESCRIBE THE PRODUCT/SERVICE TO BE DISRUPTED**
   - Value
   - Use
   - Business model
   - Interaction
   - Operating

2. **REPRESENT YOUR PRODUCT/SERVICE WITH C-K**
   - Avoids getting wet
   - Helps getting dry when wet
   - Dries the user afterwards
   - For regular use
   - For single use
   - Disposable
   - Made of a standard waterproof canvas
   - Without canvas
   - With an adaptable canvas
   - For outside journeys
   - Without outside journeys
   - People don’t transit anymore
   - People transit under covered walkways
   - To the user’s needs
   - To its environment (rain, wind...)

3. **GENERATE DISRUPTIVE CONCEPTS**
   - Made for cities
   - Made for public transport

4. **EXPLORE YOUR NEW CONCEPTS**
   - Sold to the user
   - Rented to the user
   - Sold to a third party
   - To cities for their citizens
   - To public transport for its passengers

5. **REFINE YOUR SOLUTIONS**
   - The “virtual umbrella” app
     - Technos?
     - Geolocated ads
   - Benefits?
   - For shop owners, for canopy retailers

6. **TEST YOUR SOLUTIONS**
   - Major risk
     - Pedestrians are not willing to change their itinerary according to the weather.
   - Test
     - A line painted on the ground indicating the “itinerary with the least rain” on a popular route.
Through this booklet, you experienced C-K and were given a taste of its potential.

Now you can practice on your internal projects, either alone or as a team, and become an innovator. If you want to use C-K to build your innovation strategy or to manage major projects in a large company, we recommend that you get help from an expert.

Thank you to the DTMI Chair team of Mines ParisTech, at the heart of C-K theory research.

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