
BASICS OF DASHBOARDING

REPORTING AND DEPLOYMENT

An analysis can only be as good as how it is **communicated** and/or **deployed**.

Crucial Questions:

- Who is in receipt of the report(s)?
- How are the workflows deployed into production?
- Can data insights be turned into useful policies?

Automatic reporting should be audited and validated **regularly**.

REPORTING AND DEPLOYMENT

Communication should occur at various stages of the project, not solely upon completion:

- keep sponsors / clients aware of broad lines
- technical details may be avoided, but documented nonetheless

Ideal scenario: analysis software is also reporting software

- minimizes human error related to cut-and-paste
- removes the need for keeping analysis and reporting separate
- makes sharing the work with other project member easier

Simplify the process further by deploying directly to the Web.

DISCUSSION

What are your favourite reporting tools?

How much should you test a product before deployment?

What's the cost of deploying a faulty product?

DASHBOARDS

A **dashboard** is any visual display of data used to monitor conditions and/or facilitate understanding.

Examples:

- interactive display that allows people to explore motor insurance claims by city, province, driver age, etc.
- PDF showing key audit metrics that gets e-mailed to a Department's DG on a weekly basis.
- wall-mounted screen that shows call centre statistics in real-time.
- mobile app that allow hospital administrators to review wait times on an hourly- and daily-basis for the current year and the previous year.

SOME QUESTIONS TO CONSIDER

In a car's dashboard, a small number of **key indicators** (speed, gasoline level, lights, etc.) need to be understood **at a glance**. A dashboard design that does not take these two characteristics under consideration can have catastrophic consequences.

The following questions need to be answered prior to the dashboard being designed:

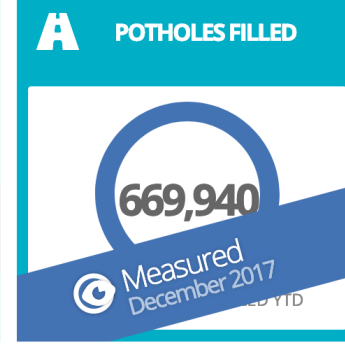
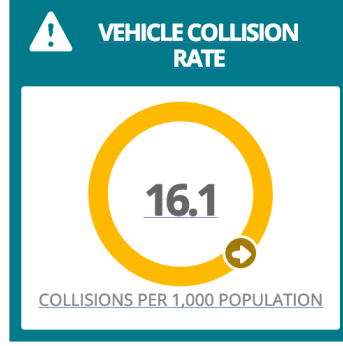
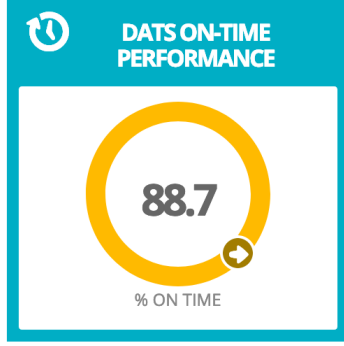
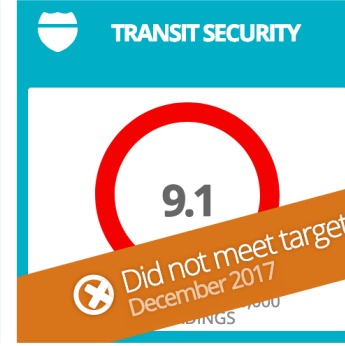
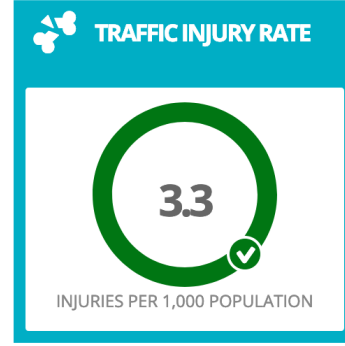
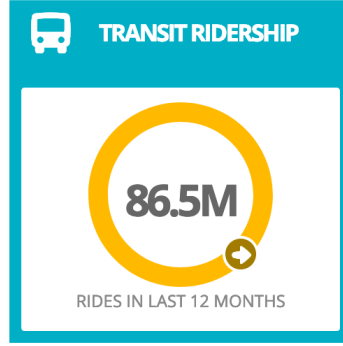
- Who is the dashboard's **consumer**?
- What **story** does the dashboard tell?
- What data (categories) will be used?
- What will **appear** on the dashboard?
- How can the dashboard **help** the consumer?



DASHBOARD DESIGN GUIDELINES

Nick Smith suggests the following 6 Golden Rules:

- **Consider the audience** (who are you trying to inform? does the DG really need to know that the servers are operating at 88% capacity?)
- **Select the right type of dashboard** (operational, strategic/executive, analytical)
- **Group data logically, use space wisely** (split functional areas: product, sales/marketing, finance, people, etc.)
- **Make the data relevant to the audience** (scope and reach of data, different dashboards for different departments, etc.)
- **Avoid cluttering the dashboard** (present the most important metrics only)
- **Refresh your data at the right frequency** (real-time, daily, weekly, monthly, etc.)

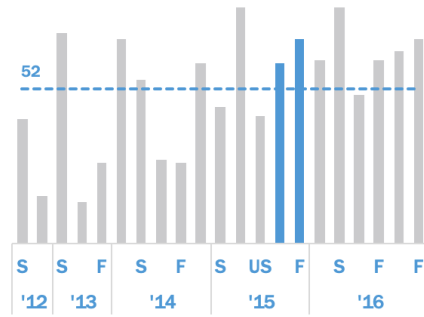


✔ Meets or Exceeds Target
➕ Near Target
✖ Needs Improvement
⦿ Measuring
📊 Collecting Data

Course Metrics

[<https://bigbookofdashboards.com/dashboards.html>]

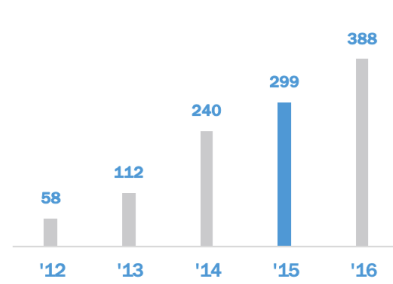
Students



1097

Total Students in five years

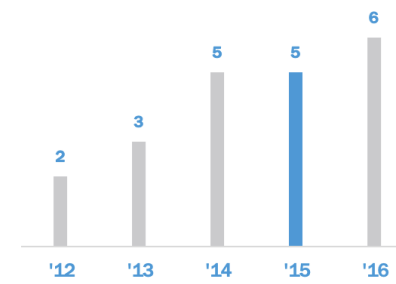
Enrollments



687

Total Students in 2015-2016

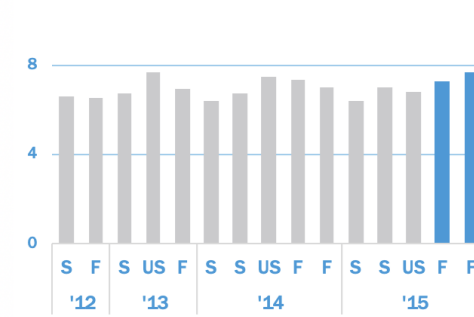
Classes



21

Total Classes in five years

Ratings



7.7 of 8

Most recent instructor rating (out of 8.0)

Semesters

2015 Fall Semester 001

Questions

- I developed specific skills and competencies
- Overall, this was an excellent course
- The instructor communicated clearly
- The Instructor graded fairly
- The instructor was well organized
- The instructor interacted well with students
- Overall, this instructor was excellent

2015 Fall Semester 002

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● BANA | College ● Shaffer

Ratings



COURSE METRICS DASHBOARD – STRENGTHS

Easy-to-see key metrics

Simple color scheme

Potential to be static or interactive

Both overview and details are clear

DISCUSSION

There are no perfect dashboards – no collection of charts will ever suit everyone who encounters it.

All dashboards should be **truthful** and **functional**, but dashboards that are also **elegant** (delightful, enjoyable) will take you further.

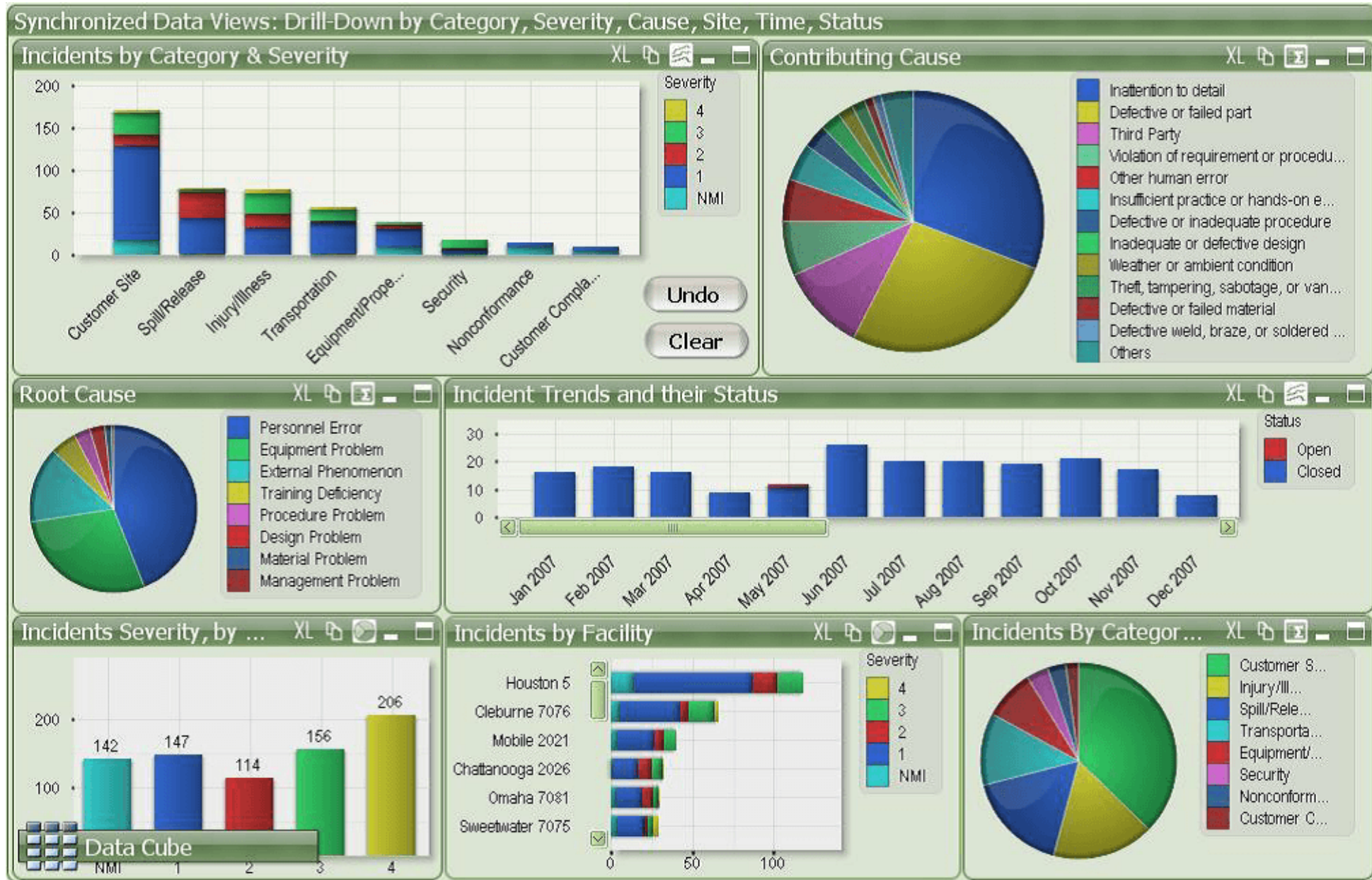
All dashboards are **incomplete**. Good dashboards will still lead to dead ends, but they should allow users to ask: “Why? What is the root cause of a problem?”

Tools: Excel, Power BI, Tableau, R + Shiny, Geckoboard, Matillion, etc.

EXERCISE

Consider the following dashboards. Can you figure out, at a glance, who their audience is? What are their strengths? What are their limitations?

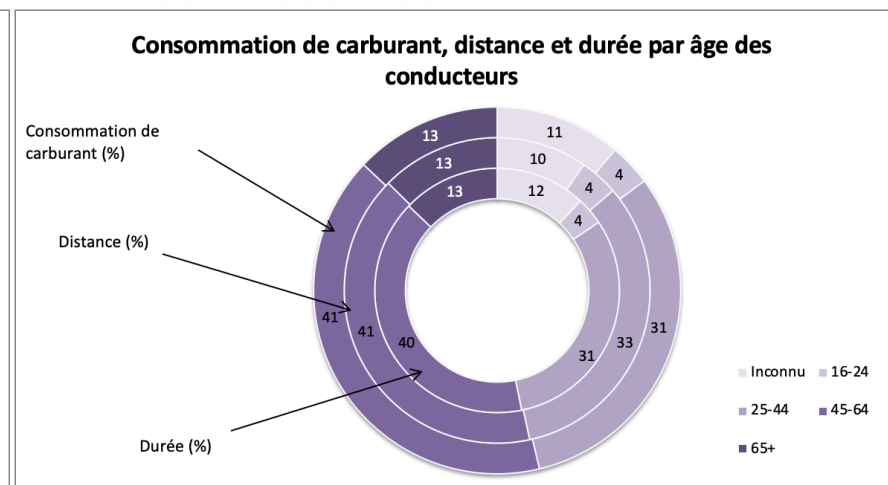
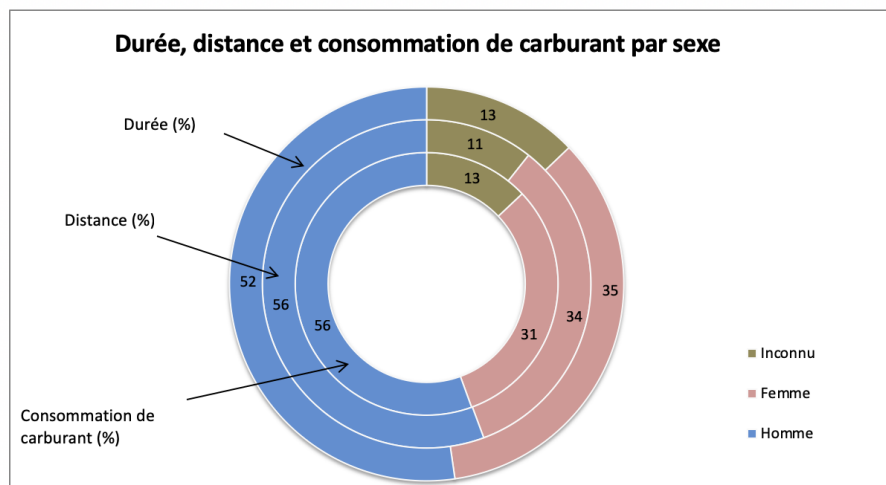
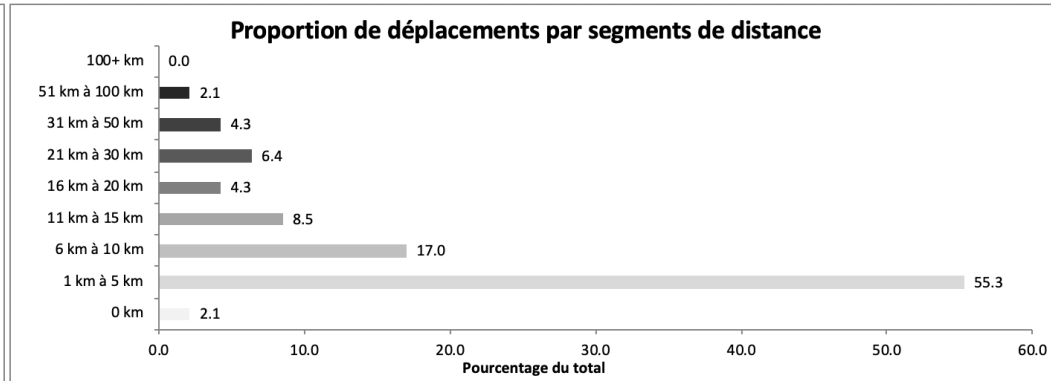
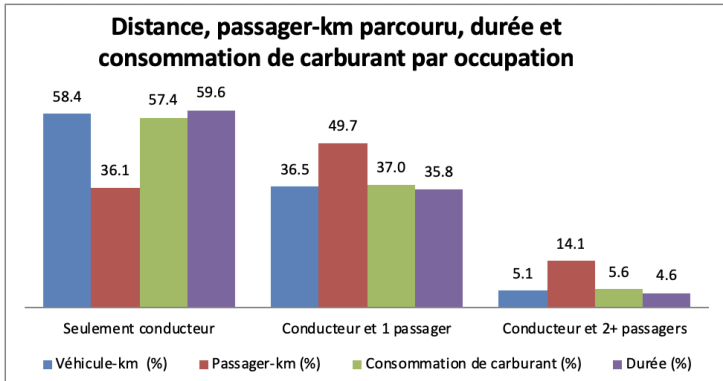
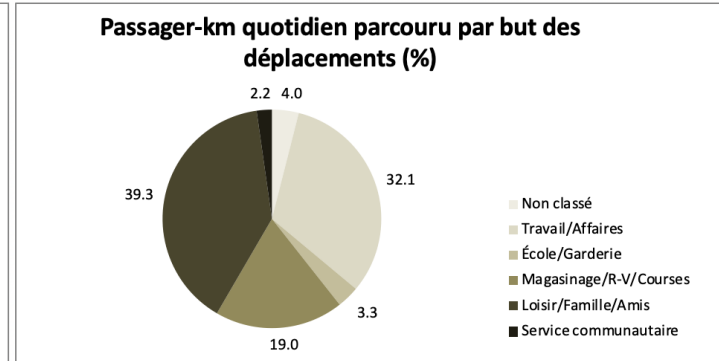
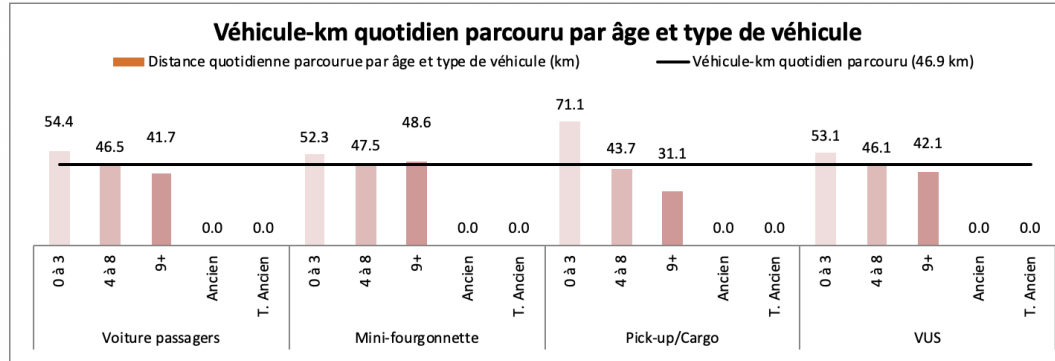
How could you improve them?





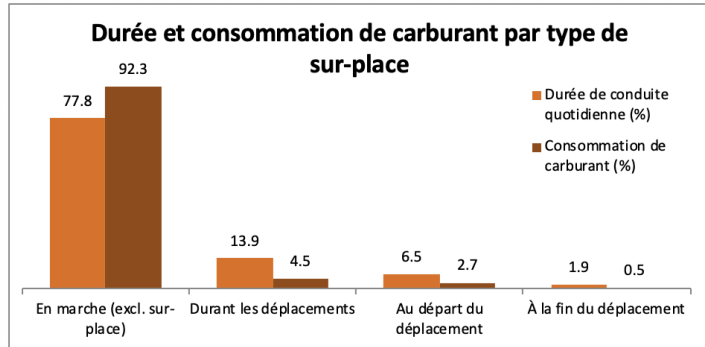
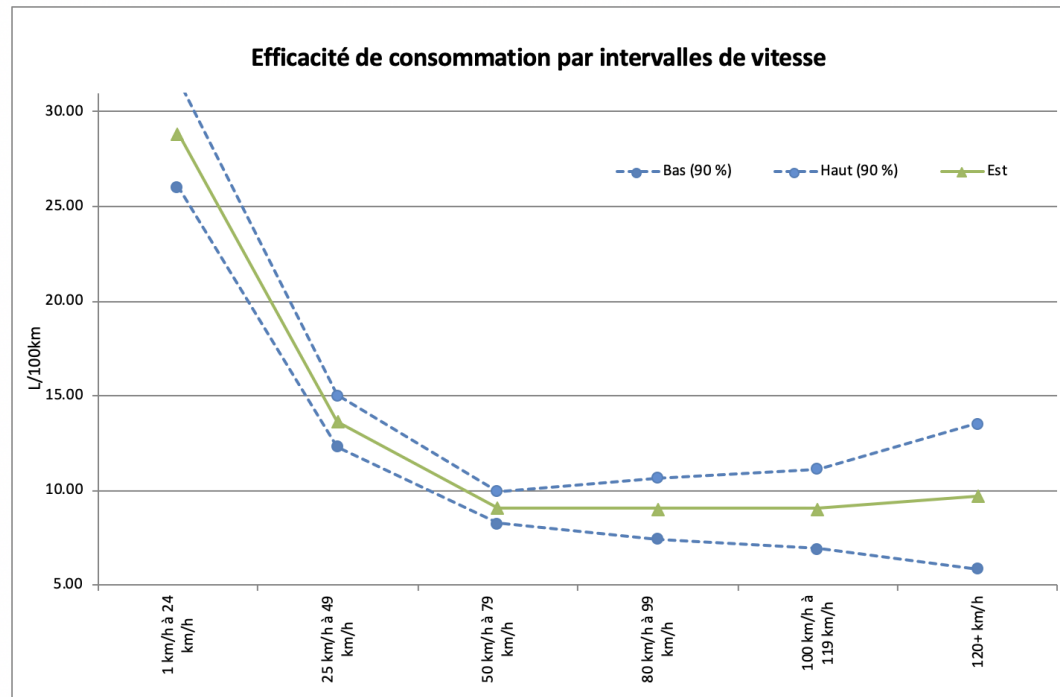
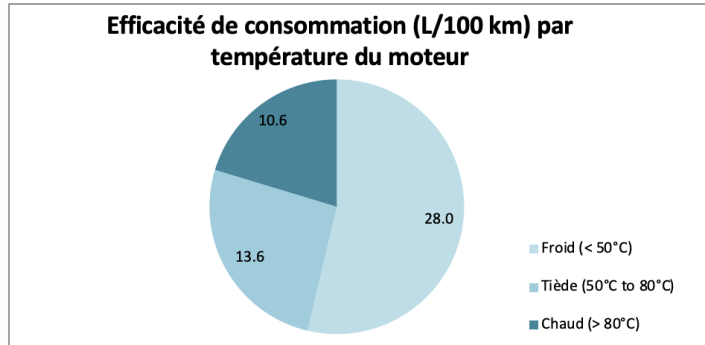
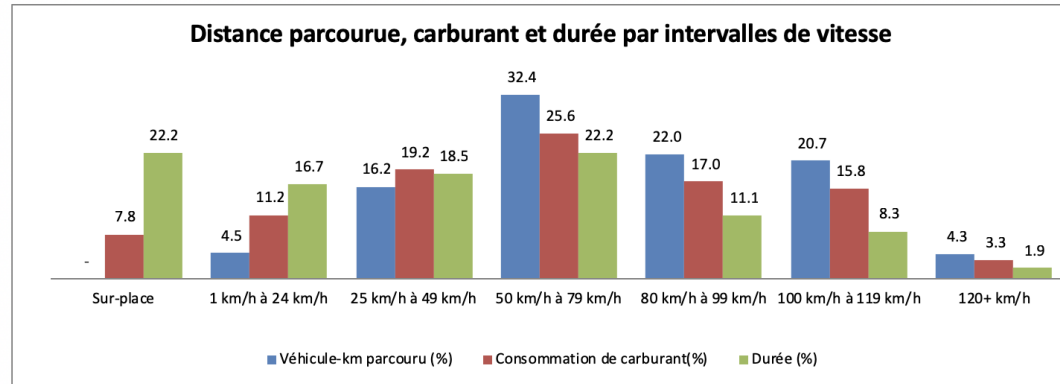
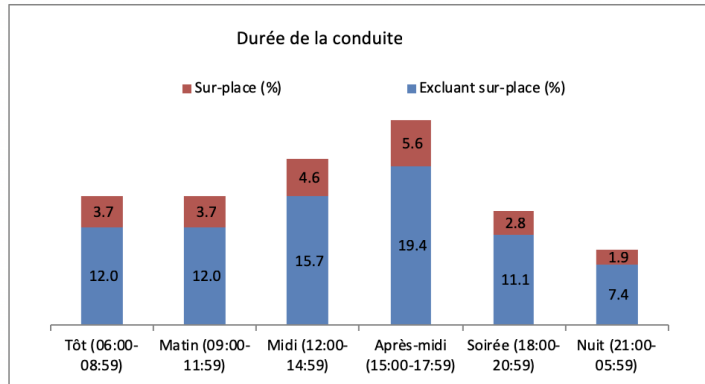
Ontario – 1er trimestre 2012

Caractéristiques des déplacements



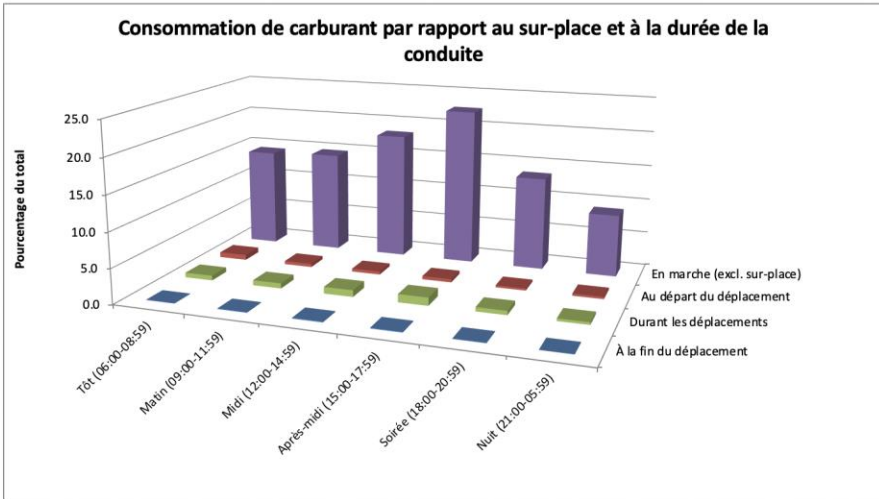
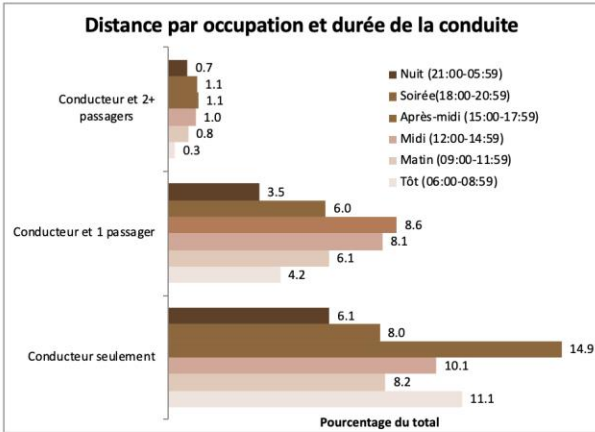
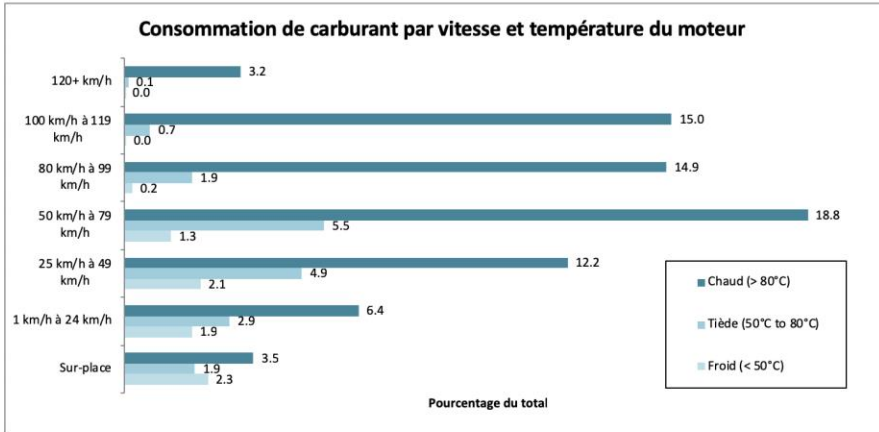
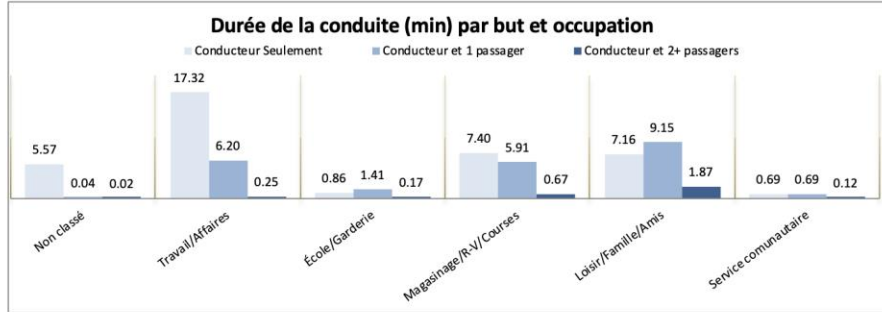
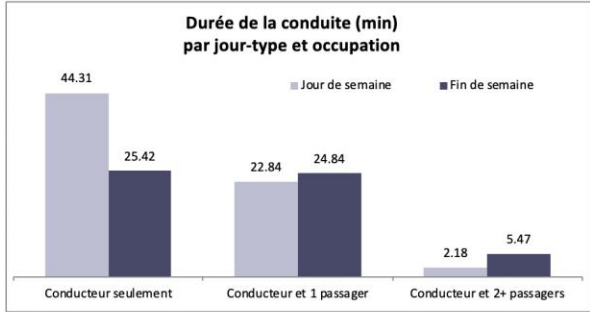
Ontario – 1er trimestre 2012

Sous-caractéristiques des déplacements



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Caractéristiques mixtes sur les déplacements



LIMITATIONS

Dashboard #1: not glanceable, overuse of colour, pie charts??

Dashboard #2: 3D visualizations, distracting borders and background, lack of filtered data, insufficient labels and context

Dashboards #3: ...

EXERCISE

In teams or individually, identify a scenario for which a dashboard could prove useful.

Determine specific questions that the dashboard could help answer or insights that it could provide.

Identify data sources and data elements that could be fed into your dashboard.

Design a display (with pen and paper) with mock charts.

What are the strengths and limitations of your dashboard? Is it functional? Elegant?