# PRIMAVERA H2020 PROJECT
# User Interface Platform

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# What is PRIMAVERA?

# Why is an UIP necessary? *The clock analogy*

# PRIMAVERA UIP

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Type of project: H2020 Project

Objective: develop a **new generation** of advanced and well-evaluated high-resolution **global climate models**, capable of simulating and predicting regional climate with unprecedented fidelity.

Higher temporal and spatial resolution.

**PRIMAVERA in numbers**

19 partners

€14.9 million

4.5 years

9 countries

1.8 petabytes (PB) of data produced

7 climate models

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# What is PRIMAVERA?

Models run from the 1950s up until 2050

Why these dates?

The models will be used to inform societal challenges that need climate data.

Most of the initiatives tackling these challenges have agendas up until 2050.

Need to compare with previous years.

Stakeholders: governments, business and society in general.

PRIMAVERA is the first step in developing these higher resolution models, as it was intended as a project to test the viability and added value of them.
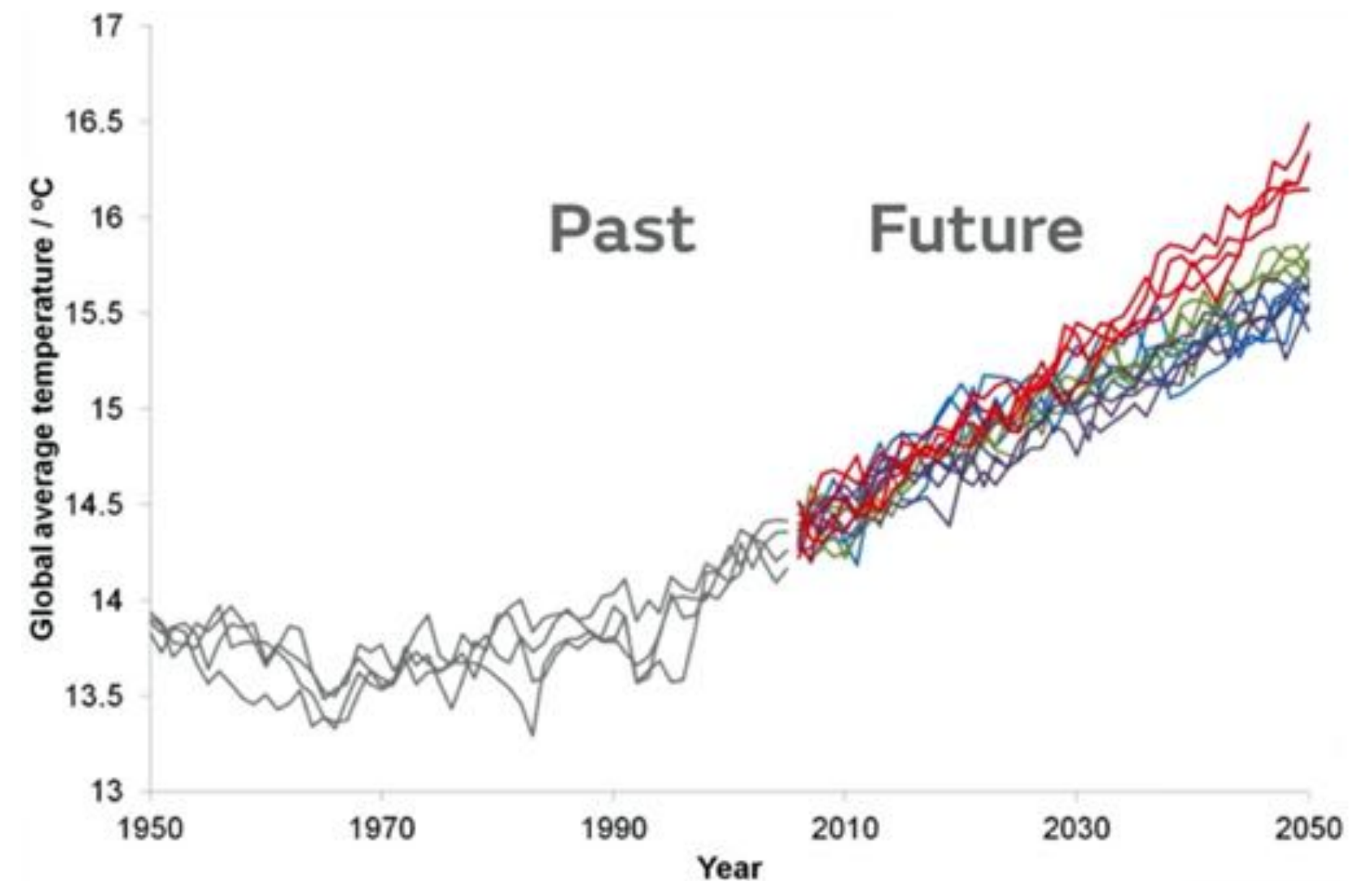
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# Why is an UIP necessary? A short answer

Let the users know that the project's results exist, and know their added value.
But keep the users in mind. If you don't keep your users in mind, you might end up with something like this:

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# Why is an UIP necessary? The clock analogy

We are all familiar with the concept of time, and we are used to measure it with our watches.

We are users of the watch, so we don't usually differenciate among watches: they just tell us the time.

Watchmakers have a different view.

Photo by Ocean Ng on Unsplash

# Why is an UIP necessary? The clock analogy

For a watchmaker

For someone who needs to know the time



Photo by Dimitar Stevcev on Unsplash

Photo by Ocean Ng on Unsplash

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# Why is an UIP necessary? The clock analogy

For a ~~watchmaker~~ climate scientist

For someone who needs to know ~~the time~~ climate information



Photo by Dimitar Stevcev on Unsplash

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# Why is an UIP necessary? The clock analogy

For a ~~clockmaker~~ climate scientist

For someone who needs ~~to know the time~~ climate information



Photo by Dimitar Stevcev on Unsplash



Photo by Ocean Ng on Unsplash



Photo by Luis Cortes on Unsplash



Photo by Nomadic Julien on Unsplash



Photo by Veri Ivanova on Unsplash

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# Why is an UIP necessary? Different users, different take-aways



Photo by Bence Balla-Schottner on Unsplash



Photo by American Public Power Association on Unsplash



Photo by Vlad Busuioc on Unsplash



Photo by Miguel Bautista on Unsplash



Photo by Martin Sanchez on Unsplash



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# PRIMAVERA User Survey



MetOffice, KNMI & BSC's User Engagement Team.

We started with an **initial survey**, aimed at different sectors, to **understand user needs** for weather and climate information.

**Plain & clear:** targeted at audiences that are not climate scientists.
**Multiple languages:** makes the survey more accessible, without barrier language.

83 responses, 12 EU countries

https://uip.primavera-h2020.eu/interviews/user_survey

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# PRIMAVERA UIP Key Content

Data Viewer: interactive visualisation of some of the projects results.

Sectors: pages with the key information for each audience.

Sectors factsheets: specific cases for different sectors.

Climate factsheets: general climate factoids, with a focus on broad audiences.

Story maps: specific cases in which the models add value, like extra tropical cyclones and wind storm risks.



https://uip.primavera-h2020.eu/

# PRIMAVERA UIP Data Viewer



https://uip.primavera-h2020.eu/data-viewer/

"Show, don't tell" philosophy.

Direct visual comparison between PRIMAVERA and previous results.

Challenges:
Several TBs of information processed
Make the data viewer a fluid experience.

Test, test, test: structure and presentation modified thanks to some initial user testing and feedback
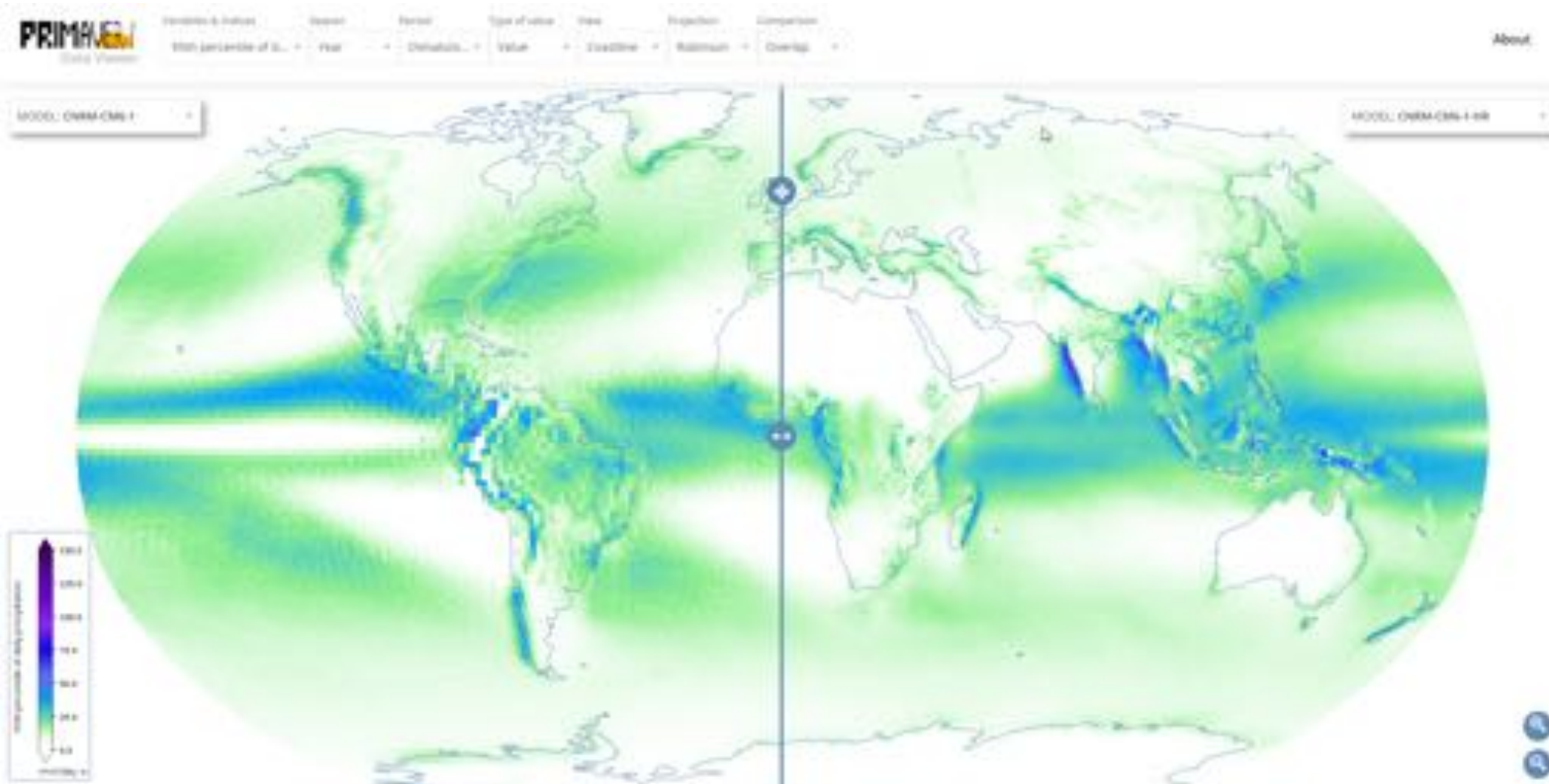
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# PRIMAVERA UIP Sectors



https://uip.primavera-h2020.eu/
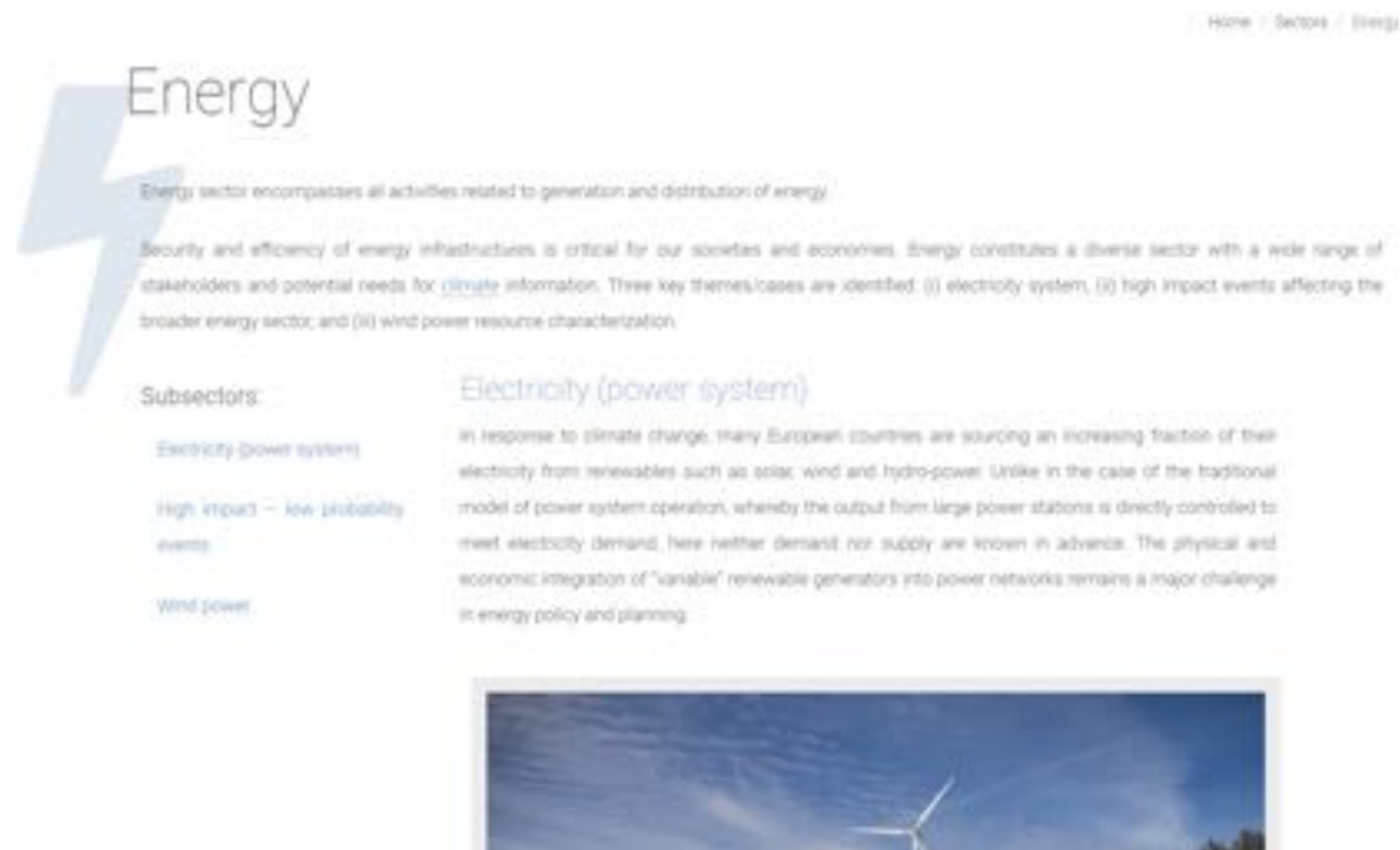
Key information for each sector:
- Context
- Subsectors of interest (if applicable)
- Added value of high resolution

# PRIMAVERA UIP Sectors factsheets

Explore the relationships between key climate phenomena and climate impacts for specific sectors:

- Atmospheric blockings and the European energy system
- Flooding impacts on the European transport system
- North Atlantic Oscillation, wind and energy over Europe
- Heatwaves and energy
- Extratropical cyclones



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# PRIMAVERA UIP Climate factsheets



## Energy

Energy sector encompasses all activities related to generation and distribution of energy.

Security and efficiency of energy infrastructures is critical for our societies and economies. Energy constitutes a diverse sector with a wide range of stakeholders and potential needs for climate information. Three key themes/cases are identified: (i) electricity system, (ii) high impact events affecting the broader energy sector; and (iii) wind power resource characterization.

Subsectors:

Electricity (power system)

High impact – low probability events

Wind power.

### Electricity (power system)

In response to climate change, many European countries are sourcing an increasing fraction of their electricity from renewables such as solar, wind and hydro-power. Unlike in the case of the traditional model of power system operation, whereby the output from large power stations is directly controlled to meet electricity demand, here neither demand nor supply are known in advance. The physical and economic integration of 'variable' renewable generators into power networks remains a major challenge in energy policy and planning.

**https://uip.primavera-h2020.eu/**

Key information for each sector:
- Context
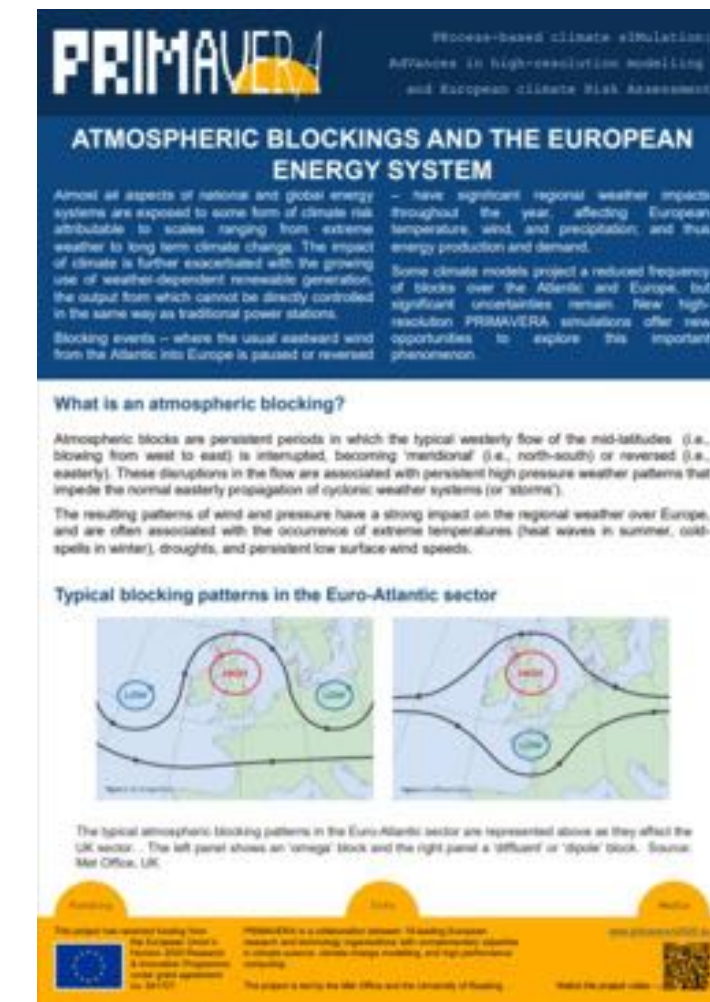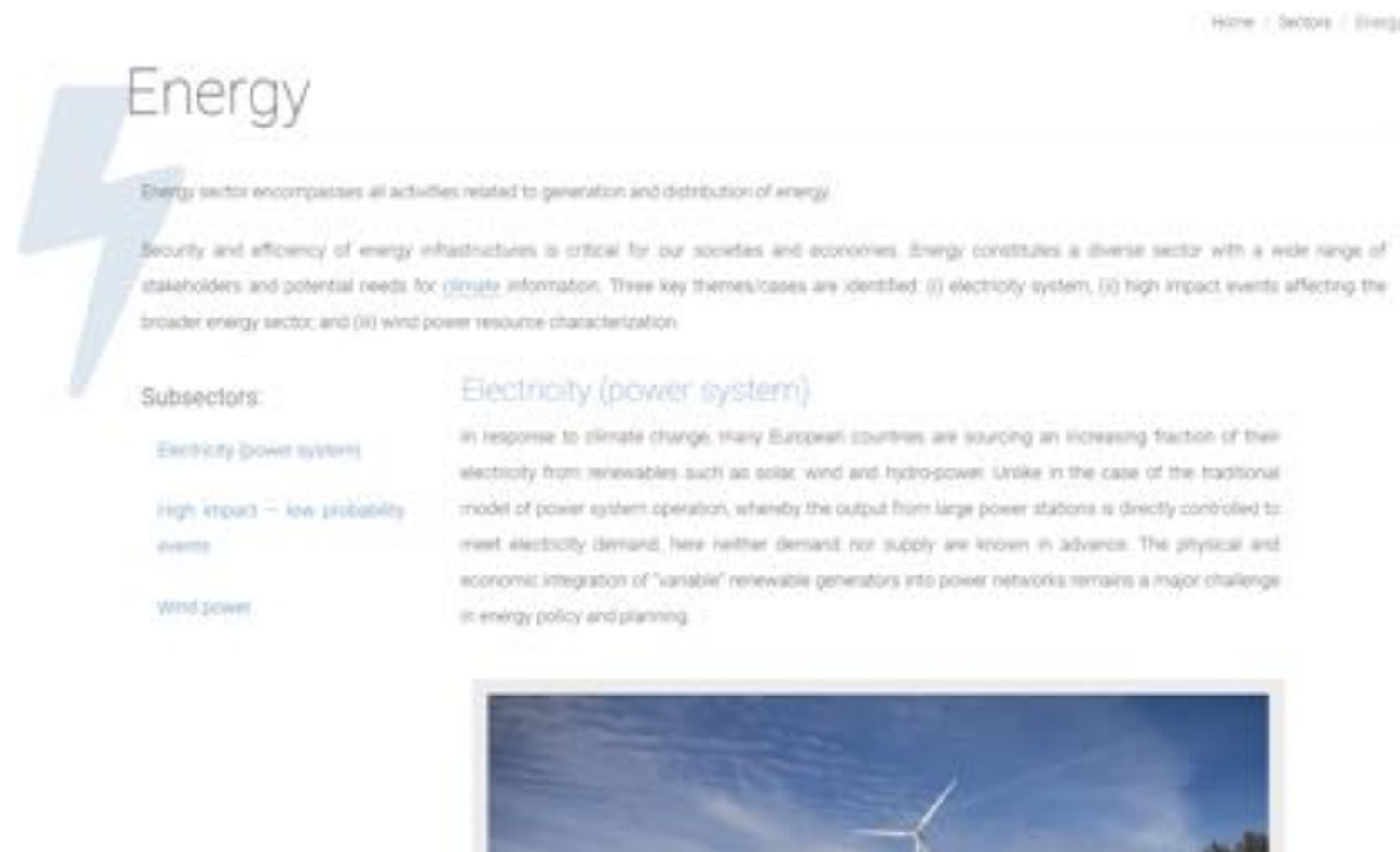- Subsectors of interest (if applicable)
- Added value of high resolution

# PRIMAVERA UIP Storymaps



Using storytelling to engage specific users, by showcasing specific episodes, and highlighting the added value of higher resolution.

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# PRIMAVERA UIP | Gathering user feedback



PRIMAVERA UIP survey

This survey is about the PRIMAVERA User Interface Platform (UIP), https://uip.primavera-h2020.eu. You will not need to provide any personal information in this survey and it should take no more than 10 minutes to complete. Your answers will help us to understand how the UIP is being used.

There are 12 questions; 4 of these are optional, allowing you to expand on your answers to other questions.

Thank you for your participation!

-- The PRIMAVERA user engagement team

We keep improving the platform, but for that, we need your feedback!

Fill the survey below
https://uip.primavera-h2020.eu/uip-survey

# PRIMAVERA UIP | Some metrics

Having a separate webpage to showcase the Project's result is useful: visitors are spending time interacting with the content, they come from the project's website

Working together with MetOffice, KNMI & BSC's User Engagement Team proved really useful:
- Capability of reaching users directly
- Insights & improvements of the original webpage
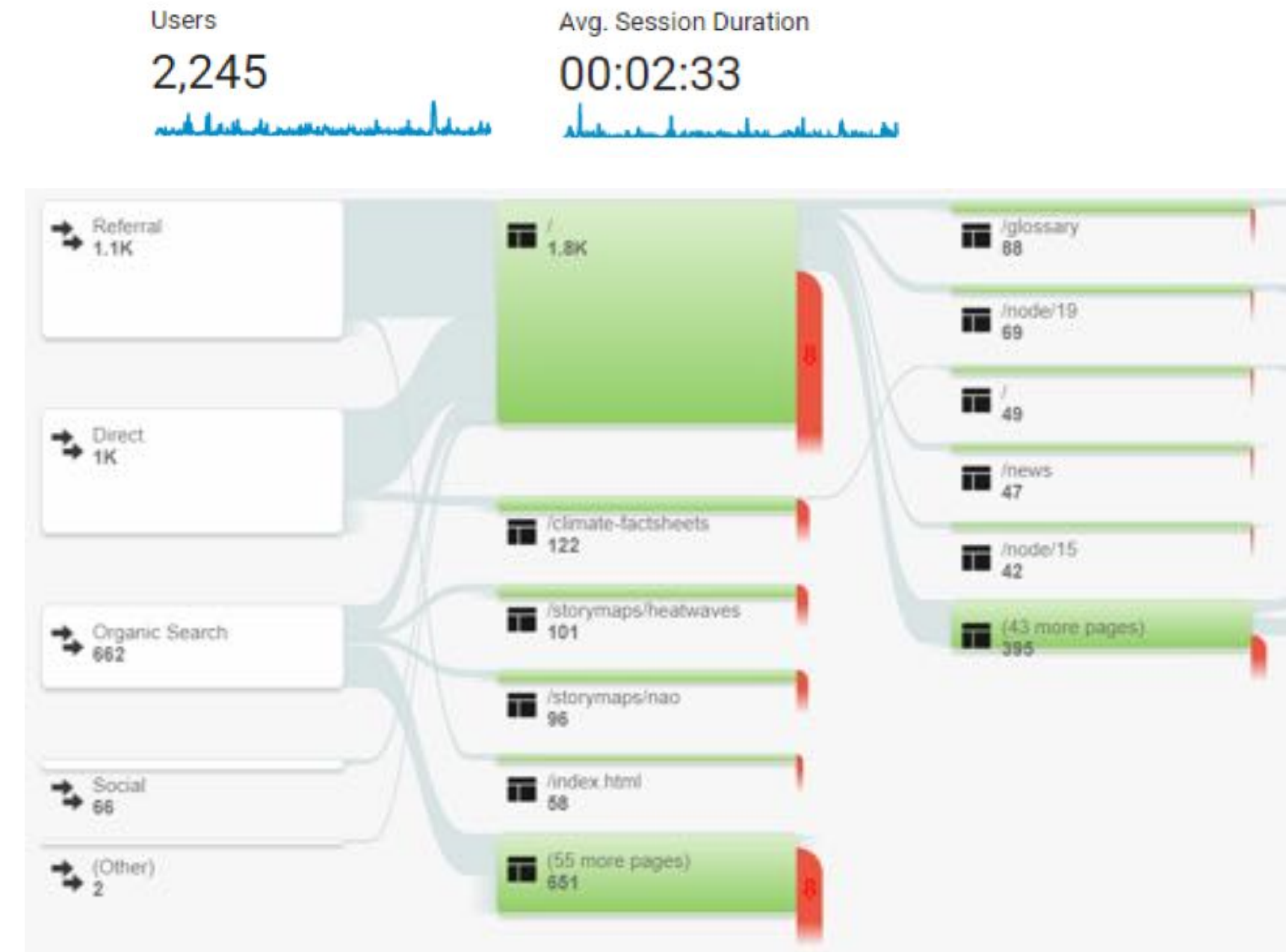
# PRIMAVERA UIP | Do's & dont's

## Do's

- **Engage users beforehand**: know their needs in detail.

- **Interactive visualisations**: let users play around with the data you provide

- **Turn data into stories**: connect data with specific events that are relatable to the user.

- **Test, test, test**: find groups of the users you want to reach.

- **Facilitate feedback:** let users give you feedback. Sometimes it is as easy as a pop-up to a feedback survey.

## Dont's

- **Don't assume users' needs**: you might be surprised in the variety of detail the users ask for.

- **Don't despair**: developing a platform that targets multiple stakeholders *is* hard.

- **Don't work alone**: collaborate with teams that have different expertise.

- **Don't give ALL the data:** filter the data for the users, to avoid informational overload.

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# **Thank you!** Any questions?

**Visit the UIP and contribute to our survey!** https://uip.primavera-h2020.eu/uip-survey

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