Project 101122231 — ASTERIx-CAESar

D7.3 – ASTERIx-CAESar project video

Deliverable Title	ASTERIx-CAESar project video			
Nature of the deliverable[1]	☐R	☐DEM	☒DEC	☐Other
Dissemination level[2]	☒PU	☐SEN		
Date of Submission	20/11/2024			

1 Please indicate the nature of the deliverable using one of the following codes (according to the GA):
Report (R), Prototype, Demonstrator (DEM), Websites, patents filing, press & media actions, videos, etc. (DEC), Software, technical diagram, algorithms, models, etc. (Other)

2 Please indicate the dissemination level using one of the following codes (according to the GA):
PU = Public
SEN = Sensitive, limited under the conditions of the Grant Agreement

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DISCLAIMER

The opinion stated in this report reflects the opinion of the authors and not the opinion of the European Commission.

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Coordinator	CENER – Fritz Zaversky
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Author(s)	Jitka Spolcova – ETN
Contributor(s)	Fritz Zaversky – CENER
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1	18/11/2024	First internal draft	ETN
2	19/11/2024	Final Draft	CENER – Project coordinator
3	20/11/2024	Final submitted version	CENER – Project coordinator

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Executive Summary

The current deliverable (D7.3) is entitled "ASTERIx-CAESar project video". It is a public document produced within Task 7.1 "Dissemination & Communication activities" (WP7) of the ASTERIx-CAESar project.

The main objective of WP7 is to conduct targeted, effective, and high impact dissemination and communication activities, and the video described in this document is one of the pillars towards achieving optimal communication and dissemination of the results throughout the entirety of the project and beyond.

The communication team has worked closely with professional video animation company specialising in short explainer videos.

The animated video enhances the project visual identity and public image, hence allowing an easier identification by the public, ensuring visibility and recognition. The construction of a strong brand identity initiated with the public communication materials and continued with the video paves the path towards future exploitation activities and market uptake.

This promotional video is a versatile communications tool, which can be used in (live) events, during public presentations, as well as in the framework of virtual communication and dissemination activities and platforms. The short and concise format makes the video a universal tool adaptable to different (social media) platforms, integrating the consortium's communications efforts throughout the entirety of the project.

The video is uploaded on the ASTERIx-CAESar's YouTube channel as well as the project website, so that the consortium partners as well as stakeholders will be able to easily access and leverage it.

Nomenclature

ACRONYM	DESCRIPTION
CSP	Concentrated Solar Power
HT-HEX	High-temperature Heat Exchanger
LT-HEX	Low-temperature Heat Exchanger
PV	Photovoltaic panel
WP	Work Package

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1 Description of the ASTERIx-CAESar video

Given the project team's plan to develop two videos during the project lifetime – one "teaser" at the earlier project stage and one (featuring project developments) at the end – the consortium decided to conceive the first video within the deliverable D7.3 "ASTERIx-CAESar project video" as animated. It was developed by a professional agency VideoAnimace, specialising in creating explainer animated videos.

To retain the viewer attention and to increase the video's usability across different platforms and social media, the video lasts only 2m50s. To strengthen even further the visual identity of the project, so paving the way to future (market) recognisability, the video leverages as much as possible the project's official colours, its logo, as well as partners' logos. This guarantees not only long-lasting recognisability, but also uniformity amongst all the communication and dissemination assets developed to promote ASTERIx-CAESar.

To increase even further the promotion of the project, the video has been uploaded on the ASTERIx-CAESar's YouTube channel (accessible via this link). To rule out the event of impossibility to access the YouTube in certain companies due to their internal IT restrictions/firewalls, the video was also uploaded (self-hosted in a compressed quality) at the project website's landing page (accessible via this link). This will allow all the interested viewers to watch it.

Using a storytelling and descriptive approach, the video focuses on key highlights of the project, such as

- New concept of the Concentrated Solar Power
- 24/7 Renewable Energy Sources integration
- Use of the heat for industrial purposes
- Water desalination

1.1 Script of the ASTERIx-CAESar video

The script of ASTERIx-CAESar video has been drafted to give a comprehensive introduction to the project. The script has been tailor-made to appeal to different target audiences, from experts and scientific stakeholders to the general public.

The script translates into the voice-over in the video itself. The voice-over is feminine with the British accent.

The video is structured in four thematic phases: introduction; ASTERIx-CAESar concept; other applications of the project and replication; and conclusion. The whole script is featured below.

Introduction

> The Sun provides Earth with much more energy than mankind needs. We are however confronted with its efficient and affordable collection. The energy currently produced by photovoltaic panels is not dispatchable, leads to grid instability and substantial energy curtailment.

Moreover, the massive application of photovoltaic panels leads to the famous duck curve. The more energy is produced by PVs, the less energy is demanded from the grid. Every year means added photovoltaic capacity, which makes the midday demand dip lower and lower.

Concentrated Solar Power, which captures the thermal energy of the sun, is a dispatchable solar power source providing energy storage. However, it has not yet reached the same level of market competitiveness as photovoltaic panels.

ASTERIx-CAESar concept

Therefore, a new concept of CSP is needed!

And this is where the EU-funded ASTERIx-CAESar project comes in – a consortium of 17 European organisations, coordinated by CENER, the Spanish National Renewable Energy Centre, that will demonstrate a prototype of a groundbreaking system combining Concentrated Solar Power with Thermal Energy Storage and Compressed Air Energy Storage.

It will embark on the global challenge of storing the clean renewable energy and using it when it is most needed. ASTERIx-CAESar has the breakthrough potential to guarantee 24/7 integration of variable output renewables in the energy system, thereby providing grid stability for remote as well as main-grid areas.

During the day, when solar energy is available, high-temperature solar heat is collected and stored.

Sunny periods usually coincide with low electricity prices. The ASTERIx-CAESar plant uses off-peak electricity to compress air and store it. At the same time, the heat of compression is stored.

During peak hours, when the electricity demand is high, the compressed air is heated to high temperature by using the stored solar heat. This heated pressurised air expands in a turbine to generate electricity.

This game-changing hybrid approach increases energy conversion efficiency of CSP and provides energy storage to the power grid.

Other applications of the project and replication

ASTERIx-CAESar not only generates electricity but can also provide heat for industrial processes and water desalination. The combination with desalination is particularly interesting, as ideal CSP locations are typically areas with low water availability.

The ASTERIx-CAESar project also plans virtual replication at several sites around the world. In this way, we can test and optimise the system for different climatic and geographical conditions.

Conclusion

ASTERIx-CAESar's cutting-edge concept is a key step towards cleaner dispatchable electricity production.

1.2 Photograms of the video

The key moments from the video are shown below in several print screens.

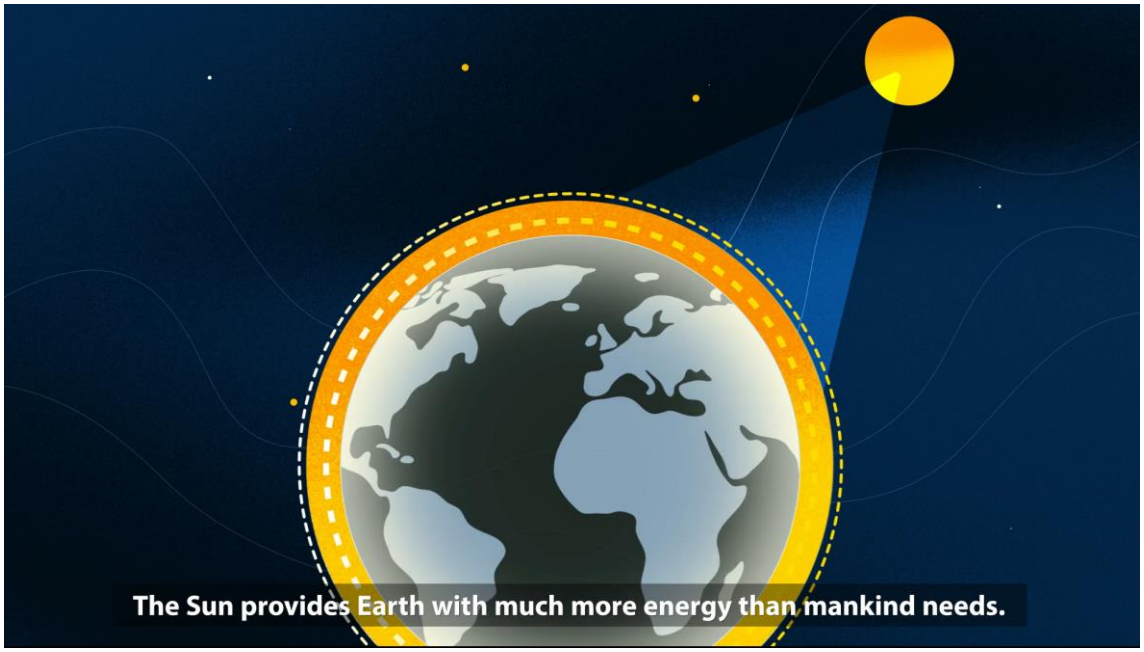

Figure 1: Video opening

Figure 2: Introduction of the main challenge

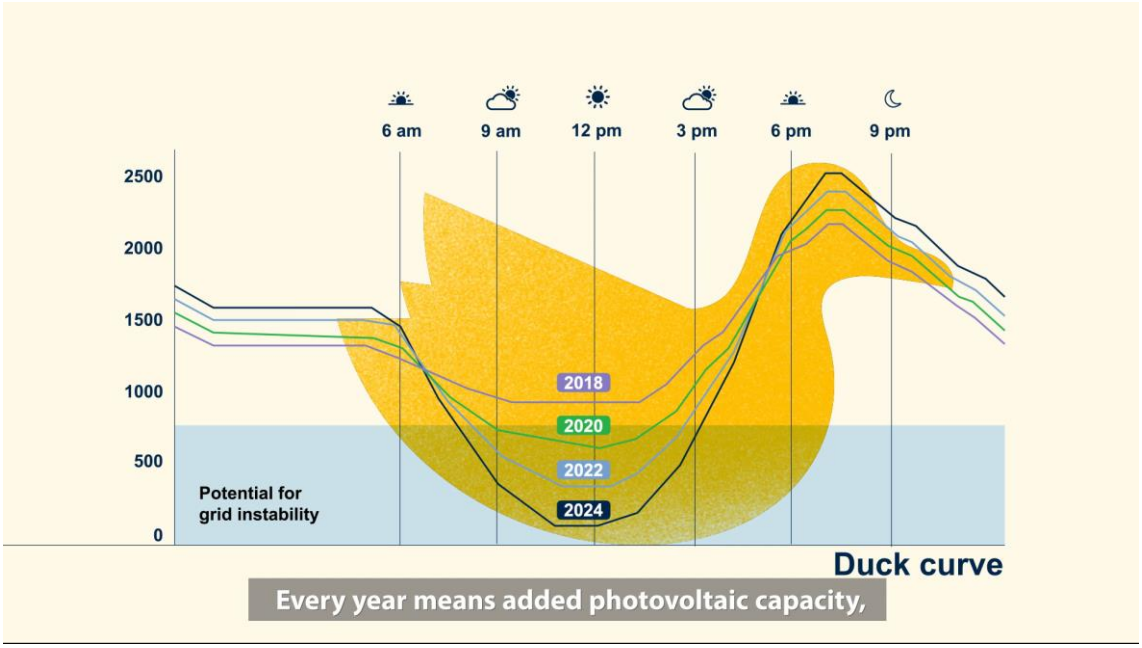

Figure 3: Explanation of the Duck curve

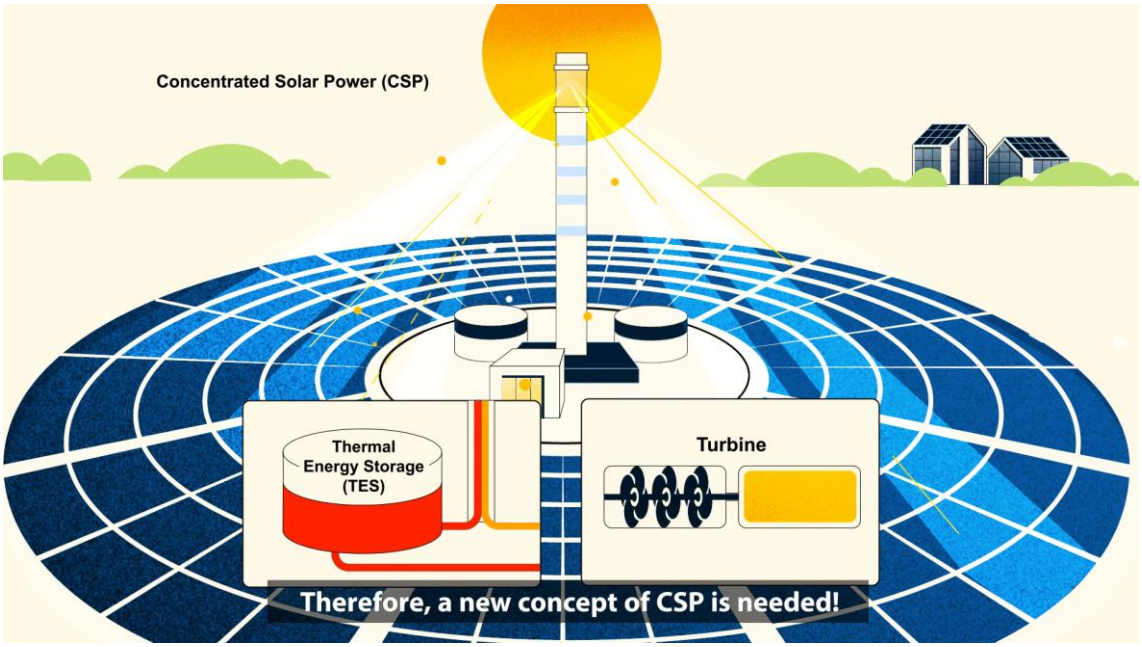

Figure 4: ASTERIx-CAESar project objective – a new CSP concept

Figure 5: Project consortium introduction

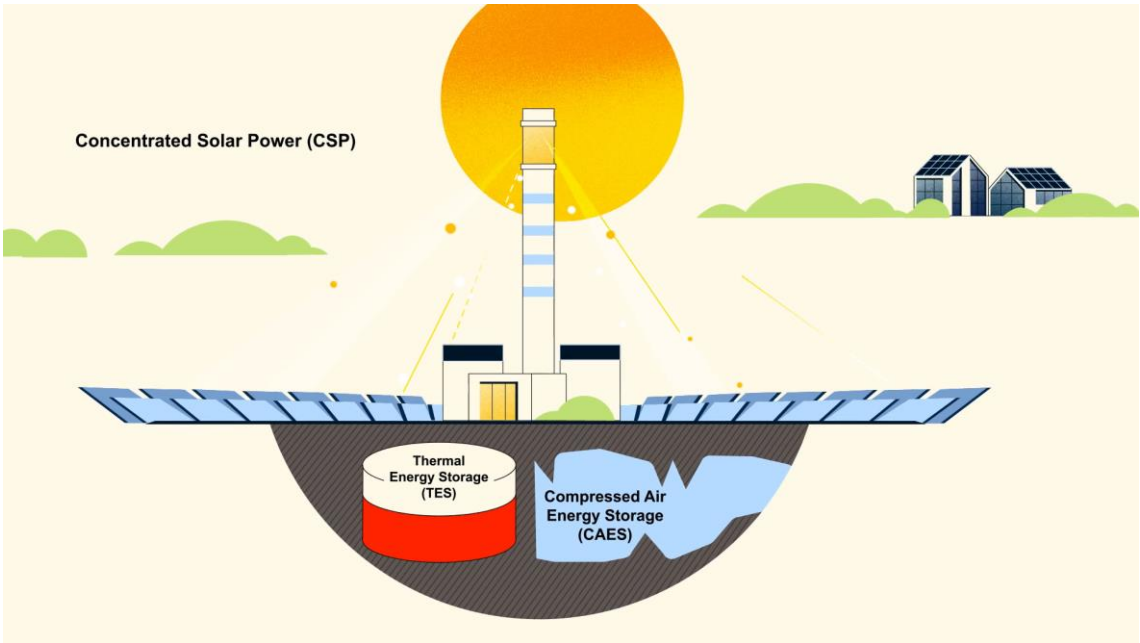

Figure 6: ASTERIx-CAESar concept

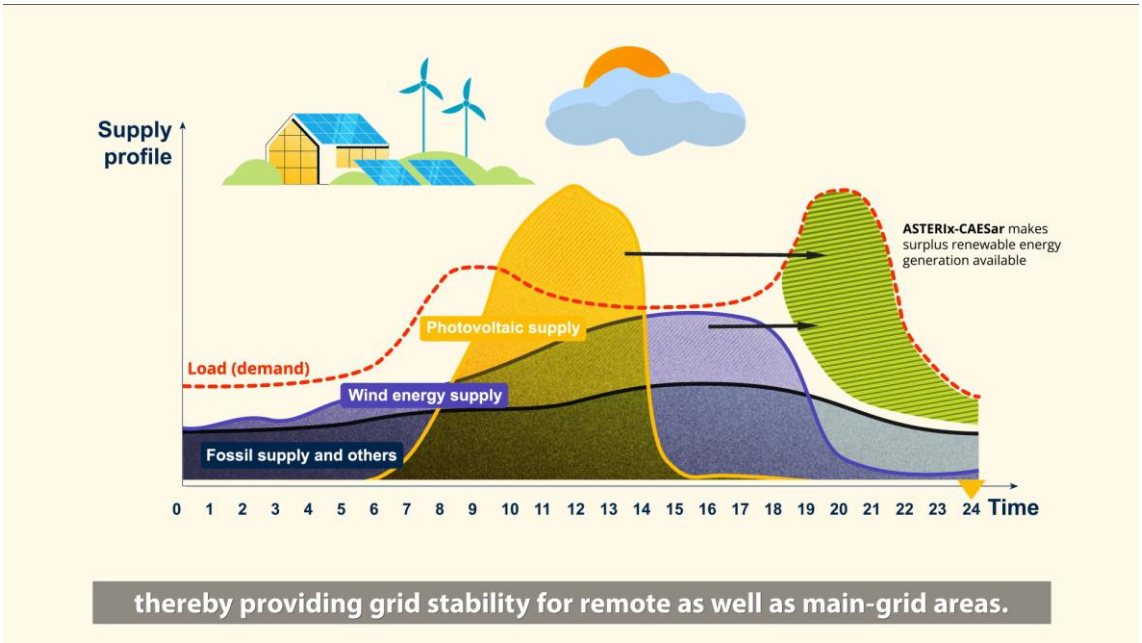

Figure 7: Project potential of 24/7 RES integration in the energy system

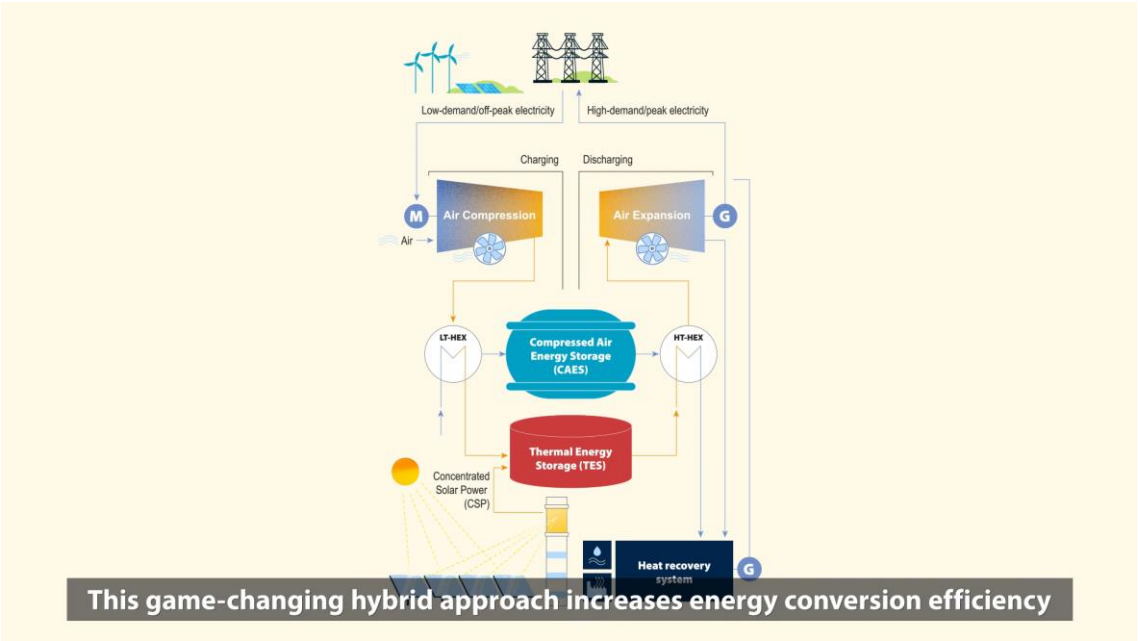

Figure 8: Explanation of the process by the animated scheme

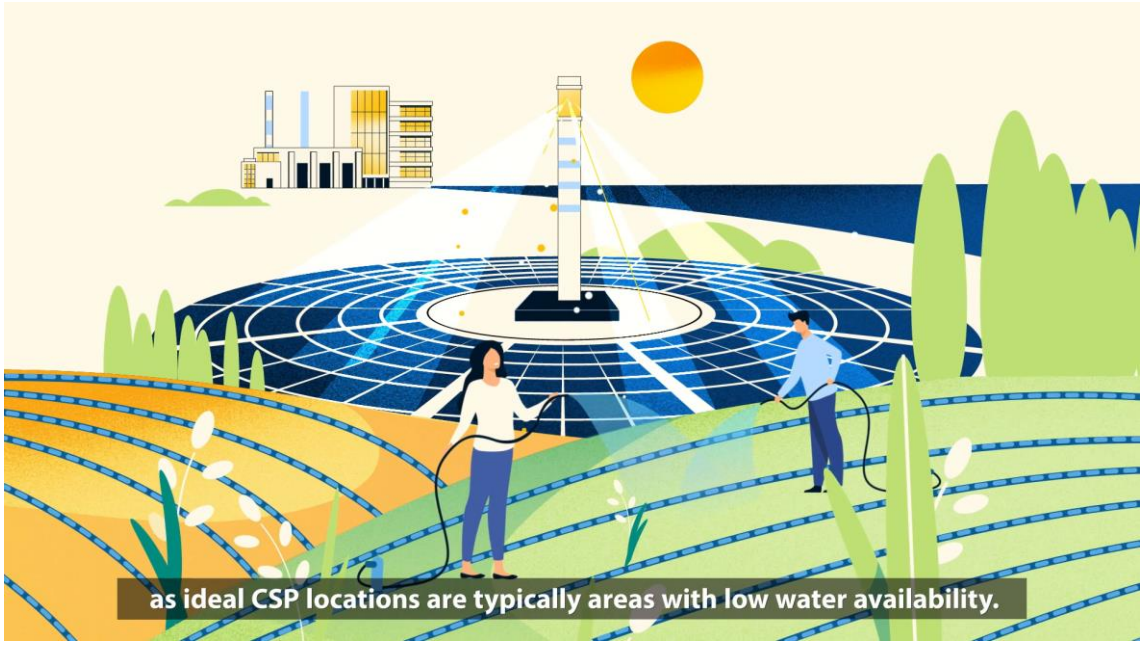

Figure 9: Introduction of two additional project features: provision of heat for industrial processes and water desalination

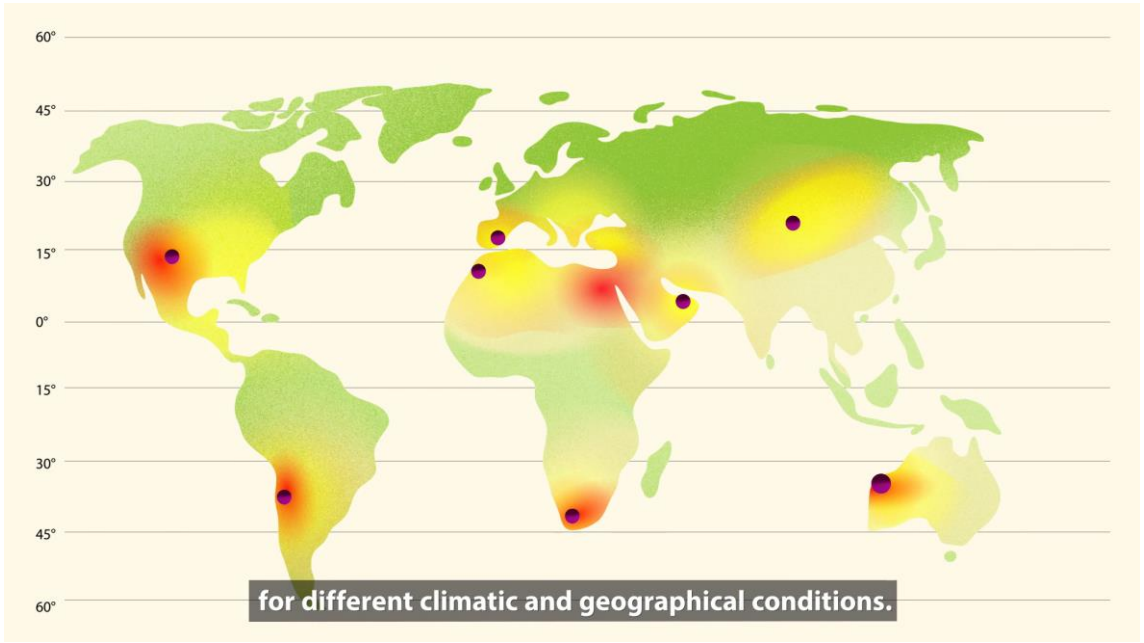

Figure 10: Virtual replication sites

Figure 11: Concluding image

Figure 12: Closing screen

2 Conclusion

The short and informative promotional video of the ASTERIx-CAESar project is fully integrated into the communication and dissemination strategy defined by the consortium. Thanks to its easy and educational format, the video will appeal to both technical and general audiences. It is suitable for a wide range of uses and occasions, from social media to conferences and international exhibitions. The video will be shared through the project social media channel and, to maximise impact, all the partners will receive the file and be encouraged to leverage it. The video is also available on YouTube as well as at the project website.

If need arises, the video can be completed by supplementary set(s) of subtitles catering for specific viewers' language group(s).

If any item in this document is ambiguous, or further assistance or advise is required then please contact the Project Team:

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