Overview of the project: purpose, objectives and ambitions
DNICast – at a glance

Ground based methods

Satellite based methods

NWP based methods

DNI nowcasting methods for optimized operation of CST

now
- 4 hours

Concentrating Solar Technology (CST)

+ validation
+ knowledge sharing & users
+ dissemination & communication
Main project objectives

- Establish a **portfolio of innovative methods** for the nowcasting of DNI and how to combine these methods

- **Validate the nowcasts and assess the influence** of improvement in DNI nowcasting on nowcasting of CST and CPV plant output

- Provide state of the art reports and **guidance** which methods can be applied for which purpose/accuracy requirement and in which combination

- Involve the **potential users** of nowcasting methods, ensure easy uptake of knowledge in **operations and privat sector services**
Motivation: optimized CST operation

- Optimize energetic & financial yield & plant life time
- CSP (Concentrating Solar Power) plant operation
  - involves e.g. control of
    - thermal storage & defocussing (avoid overload dumping)
    - heat transfer fluid mass flow
    - fossil heaters
    - turbine load: decision on long partial load or shorter full load
  - Good operator decisions need nowcasting
    - CSP system does not react instantaneously to control
- CPV: avoid ramps by defocussing
- DNICast is not about grid effects
The Consortium

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CENER, Spain
Univ. Patras, Greece
Meteotest, Switzerland
ARMINES, France
Rheinisches Inst. für Umwelt-Forschung, Univ. Köln, Germany
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Deutsches Zentrum für Luft- und Raumfahrt, DLR, Germany
Leibniz Inst. für Troposphärenforschung, Germany
CIEMAT, Spain
MeteoSwiss, Switzerland
Cyprus Institute, Cyprus
Thank you
For further information on the project please visit:
http://www.dnicast-project.net

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