

Task 52 “Large-Scale Deployment of Wind Lidar”

Julia Gottschall – *Fraunhofer IWES*, Operating Agent [OA]

David Schlipf – *Hochschule Flensburg*

Intro by OA – “lunch seminar” series

13-16 February 2023



<https://iea-wind.org/task52/>

Technology Collaboration Programme
by **iea**



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IEA Wind TCP Task 52

Large-Scale Deployment of Wind Lidar



Kick-off → May 2022

Duration: 4 years

Strategy → Objectives of IEA Wind Task 52 ('Lidar Task')

Mission

Our members work together on research to **make wind lidar the best and preferred wind measurement tool for wind energy applications.**

Vision

Using wind lidar will be easy. It will bring advantages and opportunities that **enable the (large-scale) deployment of wind energy.**

Values

Innovation, inclusion, diversity, cooperation, and openness.

- **Support the large-scale deployment of wind lidar** ... by addressing key themes and achieving relevant deliverables
- **Integrating both industry and academia** for most innovative solutions and application-oriented training of young researchers
- **Strong collaboration with other Tasks** to share our knowledge with other applications within the industry

Introduction of Task 52 work programme

Four themes → (currently) seven working groups .. working on one deliverable each

	Theme	Working groups (active)
# 1	<i>Universal inflow characterisation</i>	(#1) Turbulence Intensity (TI) by Lidar (#2) Lidar Assisted Control (LAC)
# 2	<i>Replacing met masts</i>	(#3) Lidar in Complex Terrain (#4) Lidar in Cold Climate
# 3	<i>Connecting wind lidar</i>	(#5) Digitalization (#7) Lidar Ontology
# 4	<i>Accelerating offshore wind deployment</i>	(#6) Scanning Lidar Offshore

Check our website <https://iea-wind.org/task52/> to find out how to join the individual working groups.

Introduction of Task 52 work programme

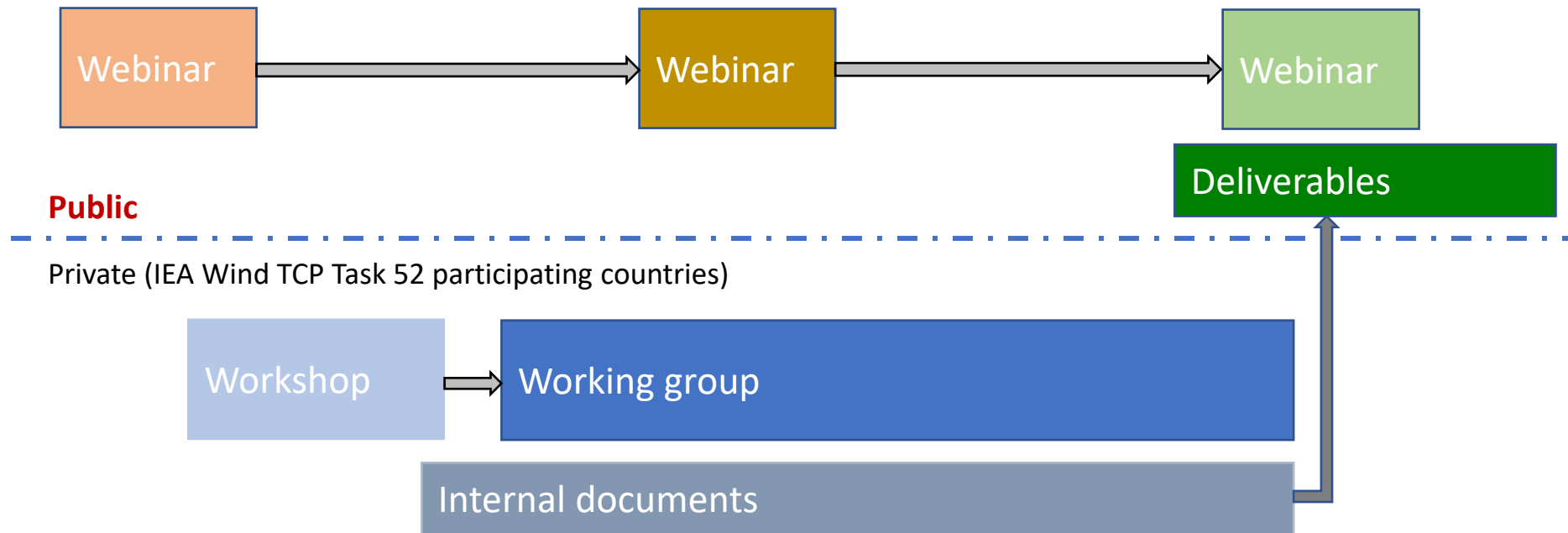
Four themes → (currently) seven working groups

	Theme	Working groups (active)
# 1	<i>Universal inflow characterisation</i>	(#1) Turbulence Intensity (TI) by Lidar (#2) Lidar Assisted Control (LAC) → Day 1 (13 Feb 2023)
# 2	<i>Replacing met masts</i>	(#3) Lidar in Complex Terrain → Day 2 (14 Feb 2023) (#4) Lidar in Cold Climate
# 3	<i>Connecting wind lidar</i>	(#5) Digitalization (#7) Lidar Ontology
# 4	<i>Accelerating offshore wind deployment</i>	(#6) Scanning Lidar Offshore → Day 3 (15 Feb 2023) .. Floating Lidar Update → Day 4 (16 Feb 2023)

Introduction of Task 52 work programme

Task format

Forming → Storming → Norming → Performing .. of Task 52 Working groups:



Agenda .. this week

IEA Wind Task 52 “lunch seminar” series (13-16 Feb 2023, 13-14 CET)

Monday, 13 Feb 2023

Topic: *Lidar Assisted Control* (led by David Schlipf)

- Feng Guo (Hochschule Flensburg) "Improved Modeling of Lidar Wind Preview for Wind Turbine Control"
- Axel Schild (IAV GmbH) “Lidar-assisted model predictive control – challenges on the way to an industrial reality”

Tuesday, 14 Feb 2023

Topic: *Lidar in Complex Terrain* (led by Alexander Stoekl)

- Andrew Hastings Black (VAISALA) “Point and lidar wind field reconstruction sensitivities in complex flow”
- Johannes Becker et al. (GEO-NET Umweltconsulting GmbH) .. title follows

Wednesday, 15 Feb 2023

Topic: *Scanning Lidar Offshore* (led by Andy Oldroyd)

- Yuko Ueda (Japan Wind Energy Consulting Inc.) “Validation of near-shore wind measurements using a dual scanning LiDAR”
- Paula Gomez et al. (DTU Wind) “Guidelines for the usage of scanning lidars for power curve verification”

Thursday, 16 Feb 2023

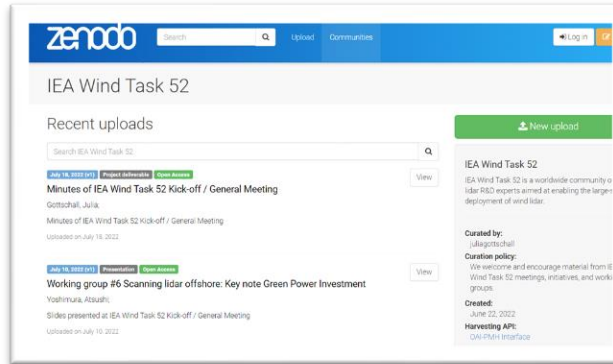
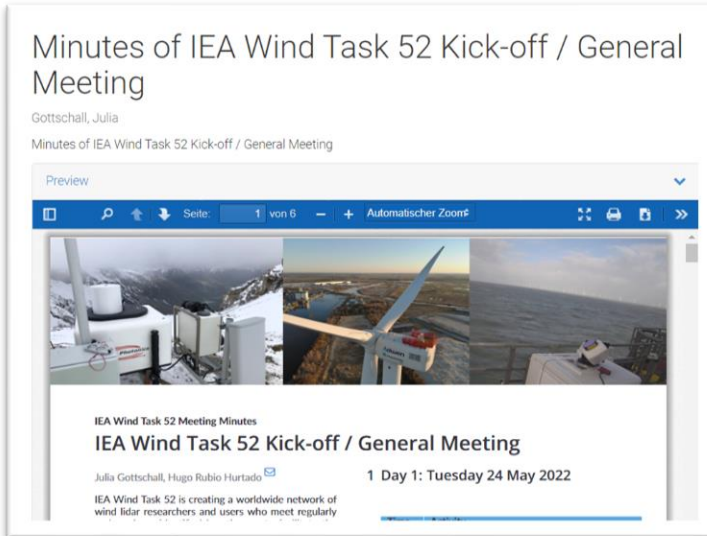
Topic: *Floating Lidar Update* (led by Julia Gottschall)

- Overview of past activities on floating lidar within the IEA Wind ‘Wind Lidar’ Task and open questions (gaps / further research)
- Peter Clive (Black & Veatch Ltd) “Floating Lidar Systems: A Data Odyssey - an update on the forthcoming standard”



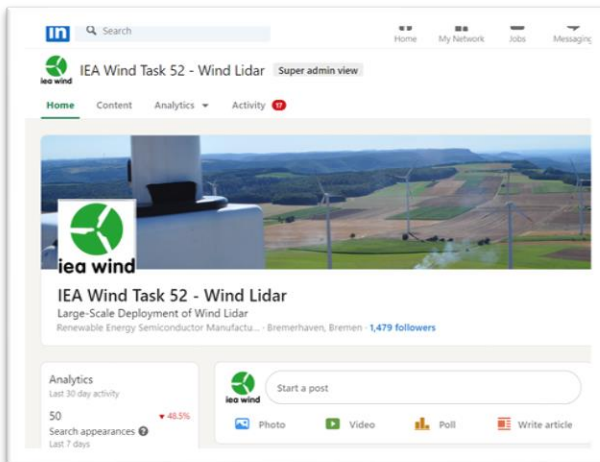
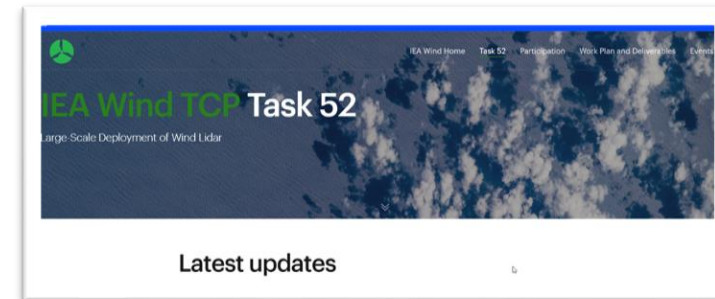
Join our Task 52 community ...

Kick-off / General Meeting (online) 2022
with 120+ participants



Zenodo community
(<https://zenodo.org/communities/ieawindtask52/>)
for published documents

Our website:
<https://iea-wind.org/task52/>



1,583 (Stand: Feb 2023)
followers on LinkedIn
(<https://www.linkedin.com/showcase/4037465/>)

Mailing list for regular newsletter (every six months) and event invitations – to be added (and for all further requests) send e-mail to IEAWind.Task52@iwes.fraunhofer.de

