Break-out session #1 - WindCube

Group 1: How can we reach universal bankability using lidar technology?	Group 2: What are the benefits of using lidar beyond the wind resource assessement? What are the new and emerging applications for the lidars (vertical, nacelle, scanning)?	Group 3: How can we realize the full potential of dual scanning lidar for offshore applications? What other applications do you see emerging for single or dual scanning lidar?	Group 4: How can we realize the full potential of nacelle-mounted lidar? What are the future applications for it?
Q: What are the lidar technology improvements needed for the full acceptance for wind measurements in terms of hardware improvements?	Q: What are the pros and cons for a permanent Lidar wind monitoring on wind farms? How can lidar be the "go-to" technology for permanent wind monitoring?	Q: What metrological advantages does dual scanning lidar offer for offshore wind energy projects? How can these advantages be maximized?	Q: What are the remaining challenges and barries for the full adoption of nacelle lidar for power performance testing?
Q: What are the lidar technology improvements needed for the full acceptance for wind measurements in terms of post-processing analysis & algorithms?	Q: What are the potential scanning lidar applications (besides WRA)? What benefits would you expect?	Q: What are the benefits of combining measurements of dual scanning lidar and floating lidar for offshore wind resource assessment (WRA)?	Q: What are the advantages of using nacelle lidar for turbine control?
Q: How can we move away from metmast verification approach for lidars?	Q: How does lidar technology contribute to optimizing the operational performance and efficiency of wind farms, going beyond its initial role in wind resource assessment?	Q: What is the value of using the scanning lidars at the pre-feasibility stage?	Q: What are the barriers for lidar integration for turbine control?
Q: How should standardization and compliance be changed to ensure that lidars meet the necessary criteria for achieving universal bankability globally?	Q: What wind lidar applications can be relevant for solar farm operations?	Q: What are the remaining challenges and barrier s for the full adaptation of dual scanning lidar for offshore applications?	Q: What other potential needs would you see for the usage of nacelle lidar?
Q: What are the other potential future developments or advancements in lidar technology that could further enhance its role in achieving universal bankability?		Q: What potential needs would you see for the us age of scanning lidar for onshore applications?	

Break-out session #2 – Weather-intelligent wind and solar farms

Group 1: Beyond resource assessments, what other weather-related challenges/risks do you encounter in the development phase of wind/solar farm?	Group 2: What are your weather-related needs in the operational phase of wind/solar projects?	Group 3: What are the analytics, performance monitoring, and post-processing data improvement needs for weather data?	Group 4: How does the digitization of weather data align with and support your processes, ensuring compatibility and seamless integration?
Q: Which weather parameters are the most crucial ones to measure when developing wind and solar farms?	Q: Which weather parameters are the most crucial ones to measure when operating wind and solar farms?	Q: Where do weather data impact the most your power plant operations? How to get access to the relevant weather data (measurements, DaaS, modeling…)?	Q: In terms of digitization and data services what considerations do you have for data flows, integration, and connectivity needs?
Q: What are the current solutions you use to measure weather parameters in the development phase of wind/solar farm?	Q: What challenges or risks do you encounter related to weather variability and unpredictability during the operational phase, and how does this impact energy production, maintenance scheduling, and overall project performance?	Q: What weather data, analytics or processing techniques are you currently using for your power plants in operation?	Q:Do you prefer one-stop-shop data platform or multiple platforms? In the case of a single platform, what specific services are deemed necessary?
Q: How does the increasing frequency and intensity of extreme weather events due to climate change influence the risk assessment and planning for wind and solar farm development?	Q: More specifically to solar farms, what are the weather challenges encountered?	Q: What additional/new/more accurate data, analytics or processing techniques would you need to streamline and improve the efficiency of your tasks and decision making (related to performance and safety for example)?	Q: How does your procurement process for digital services look like?
Q: What specific weather-related challenges arise during the site selection process for wind and solar farms, and how do these impact the overall feasibility and success of the project?	Q: What challenges or opportunities do you encounter when combining on-site meteorological data with weather forecasts, and how does it impact the overall reliability and efficiency of your wind/solar energy operations?	Q: what are the specific weather data and related analytics needed for hybrid projects integrating multiple sources of energy generation (wind, solar, storage)?	Q: What are your views on data security? What measures you have in place to address cybersecurity concerns?
Q: How does the availability and reliability of weather data impact the decision-making process during the development phase, especially in regions with limited historical weather information?		Q: If Vaisala could develop new analytics to help you, what would the first ones to priorities and what would be the acceptance criteria for you to adopt our services?	Q: Have you encountered any challenges in integrating digitized weather data with your processes?