

Minutes v1.0
LSI-VC-9 Teleconference #2: Industry & CEOS ARD
Tuesday 28 April 2020

Participants

CSA:	Paul Briand
ESA:	Ferran Gascon, Ivan Petiteville
EC/JRC:	Zoltan Szantoi
GA:	Adam Lewis (Chair), Andreia Siqueira, Medhavy Thankappan
Labsphere:	Chris Durell, Brandon Russell
JAXA:	Takeo Tadono, Ake Rosenqvist
KARI:	Chiho Kang, Daehoon Yoo
LSI-VC Sec:	Matt Steventon
NOAA:	Kevin Gallo
SIT Chair Team:	Stephen Ward, George Dyke
SEO:	Brian Killough
UK Catapult for UKSA:	Electra Panagoulia
USGS:	Steve Labahn, Jenn Lacey, Tim Stryker
WGCV:	Cindy Ong, Nigel Fox
WGISS:	Rob Woodcock

The presentation slides compiled for this meeting are attached in Appendix A.

Introduction

- Adam Lewis (GA, LSI-VC Co-Lead) welcomed everyone to the call. Matt Steventon (LSI-VC Sec) presented some background slides.
- Ivan Petiteville (ESA) asked whether we are considering value-adding service providers in our definition of industry. They are a critical piece of the landscape and should be included. Adam confirmed they are key and are being considered.
- Paul Briand (CSA) asked about software solution providers like PCI Geomatics and whether they are considered. Zoltan Szantoi (EC/JRC, LSI-VC Co-Lead) confirmed that the Leads have already discussed CEOS ARD with PCI in one of the exploratory consultation calls. Paul suggested that there are other similar companies that should be consulted (e.g., Gamma, ENVI). Paul will send a list of suggestions to Zoltan.

Industry Consultation Findings

- Adam presented some outcomes from the exploratory calls with select industry contacts (slides 6-8).
- Chris Durell (Labsphere) asked how realistic it is for 30m GSD data to be effectively transferred to less than 5m GSD without geometric and BRDF and other radiometric error transfer? Adam noted the alternative of aggregating the 5m data to a 10m or 30m level. This is probably more realistic, but industry can decide the best approach on an individual basis.

VH-RODA Outcomes Related to CEOS ARD and Industry

- Medhavy Thankappan (GA) presented select relevant outcomes from the 2019 VH-RODA workshop (slides 9-10).
- Ferran Gascon (ESA) questioned whether the proposed IVOS session on CEOS ARD will have the scope we are interested in as LSI-VC with regard to industry engagement. Nigel Fox (WGCV IVOS Lead) responded that cal/val is the focus, both radiometric and geometric. The focus is about understanding how IVOS could be an intermediary to look at the few elements that the commercial sector is looking to address and to communicate those as potential evolutions of the CARD4L PFS.
- Steve Labahn (USGS, LSI-VC Co-Lead) can see a role for IVOS working on moving products along the continuum towards higher levels of interoperability.

IVOS-32 Outcomes Related to CEOS ARD and Industry

- Steve Labahn (USGS, LSI-VC Co-Lead) reported relevant outcomes from IVOS-32 (slides 11-14).
- Nigel Fox reported that some of the industry representatives he has engaged with have shown interest in committing time and effort into tailoring the PFS to meet the standards or classifications that are applicable to their specific applications. He noted Maxar as an example.
- Nigel clarified that ESA's Earthnet Data Assessment Pilot (EDAP) is being worked on by some people that are also engaged in IVOS, but it is not strictly an IVOS activity (it is an NPL activity for ESA).
- Steve noted that IVOS has an existing dialogue with the commercial sector regarding CEOS ARD. This will be revisited later in the call.
- Nigel Fox emphasised that the maturity matrix type method for evaluation and representation of sensor data quality is a joint activity with WGISS and also in collaboration with VH-RODA and JACIE going forward (at least in the context of evaluation with NASA and USGS as to its viability as a common process). The aim is to evaluate how this can be used for ARD representation as well.

JACIE

- Steve Labahn reported on The Joint Agency Commercial Imagery Evaluation (JACIE) initiative (slides 15-16). JACIE presents another opportunity/forum for commercial engagement. Steve noted the [JACIE 2020 workshop](#) as one opportunity in particular.
- Kevin Gallo (NOAA) noted that there might still be room for additional JACIE 2020 topics if there is something we would like to raise related to CEOS ARD.
- Steve confirmed that there is overlap with participants in CEOS (e.g., Medhavy Thankappan of GA, Valentina Boccia of ESA).
- Jenn Lacey (USGS) added that JACIE is also an excellent forum for engaging with governmental users of commercial imagery.
- Tim Stryker (USGS) suggested that JACIE is a good forum for intermediary activities in support of CEOS ARD. It is a long-standing and useful activity that is gaining increased recognition in the community.
- Steve sees JACIE as a US counterpart to the European VH-RODA effort. One thing to be explored going forward is whether there is the possibility of bringing the JACIE and Planet ARD workshops closer together.

Paper: CEOS Analysis Ready Data – Involving the Private Sector

- Adam Lewis presented on the discussion [paper](#) submitted as a first draft to SIT-35 for CEOS review and feedback (slides 18-23).
- Adam asked whether we need to consider adding 'Advisory Notes' as a fourth component of the CARD4L Framework to address data policy, data formats, interoperability, etc. This is an open question to the group.
- Zoltan Szantoi (EC/JRC, LSI-VC Co-Lead) agreed that it is a good idea to add these to the CARD4L Framework. Data policy has been a topic of discussion recently for both Landsat and Sentinel.
- Ake Rosenqvist (JAXA) noted that data formats have been an ongoing point of discussion in the CARD4L SAR subgroup. From their perspective, it is very useful to have specifications for the metadata at least to allow machine-to-machine automation. This remains an option for now.
- We will make a decision on expanding the CARD4L Framework in this manner on our May 13 LSI-VC-9 wrap-up teleconference.
- Electra Panagoulia (UK Catapult / UKSA) suggested that there should be something about the increased uptake of CEOS ARD by value-add companies, not just the increased production of CEOS ARD-compliant data. Adam agreed and will reflect this in the paper, along with Chris' point about education. Ake and Ivan also agreed. It would be useful to collect feedback from the value-add industry on the CARD4L PFS.

High Resolution Datasets and CARD4L

- Steve Labahn presented some of the issues that need to be navigated when applying the CARD4L PFS to high-resolution datasets, such as the geometric accuracy requirement that calls for half-pixel accuracy (slide 26). He noted that as part of our commercial engagement, it seems that we may need some concentrated effort on ensuring the PFS are applicable to sub-10m products. This will also future-proof the PFS for higher resolution CEOS missions.
- Adam Lewis suggested that if the geometric specification is not reasonable for high-resolution datasets, we could look at what it is we are trying to achieve, and decide whether we need to insist on 'sub-pixel alignment'.
- Nigel Fox suggested this is perhaps something that can be done in conjunction with IVOS. He added that there are organisations suggesting that the PFS need to be extended to larger GIFOV sensors (i.e., at the 300m scale where again it appears that the PFS are too restrictive). Steve noted that lower resolution will be revisited in a later teleconference.
- Adam noted that there is clearly a need to revisit the specifications in this regard, but both himself and Steve don't see this being a major departure from what has been established, rather a small tweak to what we already have. The PFS have, to date, been resolution agnostic and we wouldn't wish to move away from that approach.
- Ferran Gascon (ESA) encouraged LSI to find some way to accommodate lower and higher resolution datasets under the existing PFS, rather than having resolution-specific sets of PFS. Adam agreed.

Discussion / Questions

- Electra Panagoulia asked whether there is a definition of what we consider 'industry'. From the workshops that have been run so far, this has mainly included EO data providers and/or resellers.

She asked if there has been any mention of involving the value-add industry, which represents the main driver for growth in the UK. These are companies/people that are not necessarily EO experts, but use EO data to offer value-add services.

- Adam Lewis confirmed that 'industry' covers the full spectrum from upstream to downstream (data hosts, data users, data producers, value adders, etc.).
- Electra asked if there are plans to gather requirements from value-add companies. Adam would like to involve them; the workshop would be a good opportunity. Electra noted the very broad industry of value-add companies in the UK and that the Satellite Applications Catapult, on behalf of UKSA, are happy to support the inclusion of such companies in upcoming industry-focused workshops.
- Chris Durell noted that Planet is prioritising connecting with value-add organisations/users through its ARD workshops. He also suggested that educational outreach should be considered a vital part of outreach to industry.
- It was agreed that we should make sure we have a seat at the table for all existing fora: LSI-VC should be directly involved in JACIE, VH-RODA, and IVOS, among others. VH-RODA is a good ongoing option for European engagement and Ferran Gascon confirmed it is intended to be a long-term activity. Nigel Fox (WGCV) noted that VH-RODA is nominally held every second year (more frequent if needed).
- The intention is to leverage these existing meetings as much as possible for CEOS ARD industry engagement. To do so, we need to understand the potential for increasing their scope.

LSI-VC-9-01	Ferran Gascon to follow up VH-RODA organiser Valentina Boccia of ESA to check whether there is the possibility of including more CEOS ARD related topics in support of industry engagement and also whether the meetings might be held more frequently going forward.	ASAP
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- Steve Labahn noted that there is a need to streamline CEOS engagement with industry related to CEOS ARD. There are currently multiple avenues, which may be confusing (IVOS, JACIE, LSI-VC, VH-RODA, etc.). It was suggested that this would be a good role for the SIT Chair Team, given their prioritisation of CEOS ARD for their 2020-2021 term.

LSI-VC-9-02	LSI-VC Leads to ask the SIT Chair Team for their assistance providing oversight and coordination of CEOS engagement with industry regarding ARD.	ASAP
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- Electra suggested that there needs to be good documentation to accompany CEOS ARD so that all levels of users can understand what data they are working with. Steve noted that there have been initial discussions with WGCapD around potential capacity building support; perhaps we could leverage them.

CEOS-Industry ARD Workshop

- Zoltan Szantoi introduced the background of the workshop (slides 32-35) and noted the [draft prospectus](#), which includes some preliminary objectives.
- Adam noted the need to have a clear roadmap for industry so they can engage and invest with confidence. Adam also noted that we need to be aware there may be competition between agencies and the commercial sector regarding production of ARD.
- It was agreed that while we may not be able to achieve what we wanted with a face-to-face workshop, webinars should be conducted sooner rather than later to maintain momentum. The webinars should be lightweight and invite significant Q&A and discussion at the end. It was felt that a specially-tailored virtual event could be very effective.
- It was agreed that we will target mid-late June for an initial webinar, approximately one hour in duration. Two more webinars will be targeted over the months following.
- While the original focus for the workshop was European industry, with the meeting moving online we will broaden participation.

LSI-VC-9-03	Matt to initiate planning for an initial CEOS-Industry ARD webinar, building on the original plan for the workshop and tailoring content to fit the format. This will include preparing presentation materials, compiling a list of invitees, an informational page on the website for advertisement, etc.	ASAP
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- Steve Labahn suggested enlisting WGCapD for assistance.
- Chris Durell and Electra Panagoulia offered help on outreach to industry contacts for the webinar.
- Ivan Petiteville (ESA) suggested going directly to specific contacts in the target companies rather than through the European Association of Remote Sensing Companies (EARSC) – the participants of which might not be who we are after / be able to direct our invite appropriately.

Closing

- Adam Lewis thanked everyone for their attendance and contributions to the discussions. He noted the strong agreement on the way forward on CEOS ARD industry engagement. Steve and Zolti thanked everyone for their inputs, in particular the help confirming the plan for the industry engagement webinar.
- LSI-VC-9 Teleconference #3: CARD4L and the Product Family Specifications (PFS) will be held on May 12, 07:00 – 10:00 US East ([other local times](#)) [[Presentation](#)].

Appendix A: Meeting Presentation Slides

Industry & CEOS ARD

LSI-VC-9 Teleconference #2

1

Background

Some relevant objectives of the CEOS ARD Strategy:

- Identify opportunities for ARD-oriented collaboration with the growing number of commercial smallsat constellations providing EO data;
- Establish a broad understanding of, and participation in, CEOS efforts to define, produce, apply, and promote ARD in support of societal needs;
- Ensure effective engagement of the three key stakeholder groups: EO data providers (both public and private); Big Data hosts and aggregators who stage increasing amounts of CEOS Agency free and open data; and data users.



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4.2: CEOS–Industry ARD Workshop	SIT Chair Team, CEOS Agencies	Q4 2020
CEOS Agencies commit to organise a dedicated CEOS ARD workshop, inviting agencies and the private sector to continue engagement between EO data providers (public and commercial) and big data hosts/aggregators.		

4.5: Promotion of CEOS ARD to data providers	SIT Chair, VCs	Q4 2019 Onwards
CEOS will work in a coordinated fashion to promote the uptake of CEOS ARD specifications by data providers (both CEOS Agencies and others), encourage the production of CEOS ARD as a standard output from missions, and encourage data providers to ensure that their data is pushed efficiently to data redistributors for ease of access. The CEOS LSI-VC has developed informational resources for CARD4L that can be used as a foundation.		

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Overview of this call

- Introduction
- Industry Consultation Findings
 - Review findings from:
 - the industry consultation call (Lewis),
 - VH-RODA / ESRIN panel discussions (Siquiera),
 - WGCV IVOS, JACIE, etc. (Labahn)
- Industry Engagement Paper
 - Review progress on the discussion paper on industry interactions with CEOS ARD
 - [Discussion on all of the above](#)
- CARD4L PFS applicability to higher resolution datasets
 - [Discussion](#)
- CEOS-Industry ARD Workshop (September ?)
 - Planning discussion
 - Critical milestones and targets

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Questions

Responding to questions in the chat
(discussion session is later)

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Industry Consultation Findings

A. Lewis, S. Labahn

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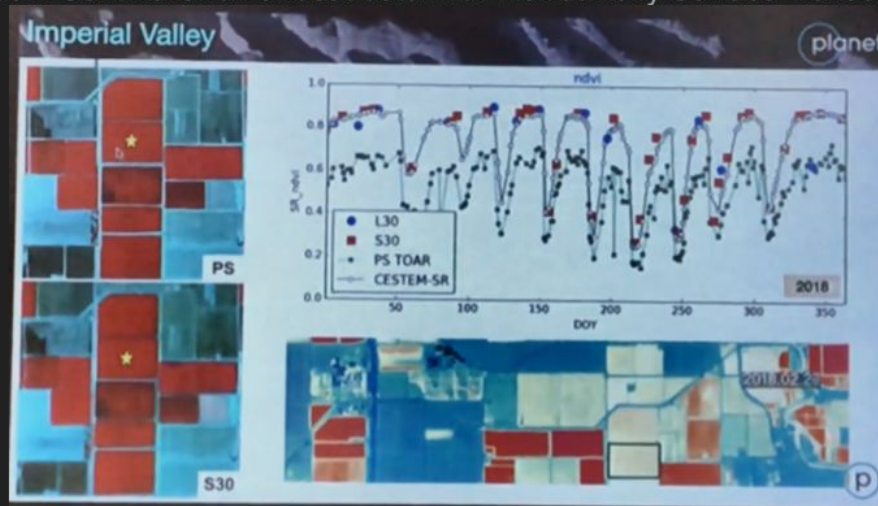
Industry telecon summary points (A. Lewis)

- Comparability between commercial and 'official' government products
 - Access to government validation data and protocols
 - Access to methods and workflows (even if not open-source) to allow adjustment
- Being engaged, understanding roles, contributing, understanding the outlook
 - Participation meetings but well structured, purposive and brief
 - Understanding where CEOS ARD is headed, so that they can identify their niche
- Clarity on methods; standardised approaches, a level-playing field
 - Processes that are easy to understand and use, such as guidance on metadata, benchmark products as a reference for procedures - e.g., self assessment procedures.
 - Peer reviewed and published standards
 - Having the CEOS community to set a clear CARD standards and lay down the rules for a competition (objective tests on quality and samples of ideal products to aspire to) so that the private sector can provide the best possible service to clients which ultimately will open market opportunities and stimulate competition and productivity.

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Highlights from ARD19 (July 2019)

Matching 30m Sentinel and Landsat data with Planet Daily Surface Reflectance



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VH-RODA Discussion Panel on ARD: Questions

- 1) There is confusion on the actual meaning of ARD
 - What is ARD for Commercial Space?
 - What is ARD for the Institutional Space?
- 2) How can Commercial Space participate and be involved in the definition process of the CEOS ARD Specifications?
- 3) Should dedicated specifications be defined for Very-High Resolution missions? (e.g. via creation of a dedicated sub-group?)
- 4) What are the next steps that need to be taken to start a dialogue between Commercial Space and Institutional Space in practical terms?

https://earth.esa.int/documents/700255/3754648/EDAP_REP_018_VH-RODA_and_CEOS_SAR_2019_Workshop_Summary_v1_0_draft.pdf/fd4df398-46f2-4976-b391-97ad54f9e2ca

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VH-RODA Discussion Panel on ARD: Key Outcomes

- 1) The ambiguity in interpretation of ARD was acknowledged, work on CEOS ARD specifications as a first step was noted
- 2) Participation by commercial sector in CEOS CARD4L forums might be challenge due to org structure constraints, example of CEOS sub groups such as IVOS with members from the commercial sector noted
- 3) The need to address specifications for higher resolution data that is typically the domain of commercial sector, was recognised
- 4) Improving interactions between institutional and commercial sectors, along the lines of JACIE and VH-RODA highlighted, with a proposal to host a session on ARD standards with commercial sector participation at the next IVOS meeting

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IVOS-32 Outcomes - Interoperability & High Res

- Survey conducted amongst the attendees on what the definition of interoperability was - quite a range of ideas (supports need for better understood and adopted definition)
 - Plan to re-circulate survey across IVOS and include commercial entities
 - Several definitions introduced new terms that would need to be defined
 - Interoperability definition needs to recognize it is application-specific
- Recognition that we have currently targeted medium resolution observations and need exists to extend into higher resolution observations to better support CEOS and commercial entities

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IVOS-32 Outcomes - PFS Quality Measures

- In the initial CARD4L PFS definition phase, IVOS made the suggestion of introducing specific quality measures into the CARD4L PFSs, but LSI-VC has tried to be agnostic to that aspect and to let users/consumers make their own judgement for their particular application based on the required metadata being reported – a primary one being the measurement of uncertainty (including traceability and radiometric accuracy). Is this still the case?

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IVOS-32 Outcomes - PFS Quality Measures

- Still anticipating IVOS-32 feedback regarding suggested adjustments to PFS uncertainty requirements at Threshold and Target levels as well as a possible recommendation to include an 'Intermediate' level of requirements to better support evolving maturity levels.
- IVOS is primarily interested in discussions with CEOS and commercial entities focused on these quality measures - again mostly uncertainty analysis - and moving users further along the interoperability continuum beyond the basic CARD4L requirements. Whereas, LSI-VC, I believe, is currently primarily interested in basic CARD4L PFS compliance at the moment.
- IVOS has been pursuing Best Practice Guidelines within EDAP (ESA's Earthnet Data Assessment Pilot) to provide the community with an approach for how to measure uncertainty.

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IVOS-32 Outcomes - PFS Involvement

- It seems that many of the commercial entities aren't necessarily that interested in making suggestions or adjustments to the CARD4L PFSs themselves - they are mostly taking those at face value.
- However, to promote industry buy-in, we should still invite commercial entities to participate in the preparation and annual review of the PFSs.

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JACIE (Joint Agency Commercial Imagery Evaluation)

The Joint Agency Commercial Imagery Evaluation (JACIE) program was formed to leverage (U.S.) federal agencies' resources for the **characterization of commercial remote sensing data** and to share those results across the federal government and beyond. Consisting of representatives from the U.S. Geological Survey (**USGS**), the National Geospatial-Intelligence Agency (**NGA**), the National Aeronautics and Space Administration (**NASA**), the National Oceanic and Atmospheric Administration (**NOAA**), and the U.S. Department of Agriculture (**USDA**). The JACIE team performs product analysis of commercial and other remote sensing data and information products, providing Earth Scientists and other users with awareness and **independent verification of commercial imagery data quality**.

2019 Workshop Participants

- Astro Digital
- Digital Globe
- Innovative Imaging and Research
- Labsphere
- L3Harris Technologies
- Maxar
- Planet
- Raytheon
- CNES
- ESA-ESRIN
- GA
- KARI
- UK National Physics Laboratory



JACIE

19th JACIE Workshop
September 22-24, 2020
NOAA Center for Weather and Climate Prediction
College Park, Maryland USA



JACIE 2020 Topics include:

- Calibration methods, techniques, and tools
- Calibration Test Sites, Reference Datasets, and other resources
- Calibration of operating and future missions
- Radiometric, Geometric, and Spatial Characterization
- Cross Calibration, Fields campaigns, and other validation methods
- Product Validation methods and results
- Artificial Intelligence and other ideas for future Calibration/Validation
- Interoperability, Harmonization, and Analysis Ready Data (ARD): Working with multi-source data

Questions

Responding to questions in the chat
(discussion session is later)

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CEOS Paper on Industry Interactions with CEOS ARD

A. Lewis

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Introduction - Industry Paper Background

Discussion Paper circulated for comment from CEOS. The paper:

- In response to Task 2.4 of the CEOS Analysis Ready Data Strategy - Interplay of Industry and CEOS ARD.
- Presents an initial evaluation of the views from the private sector on how the CEOS community needs to engage to take CARD to the next level.
- Provides an overarching rationale and possible next steps to engage with *data providers*, *data hosts* and *data users* in the private sector.

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CEOS feedback - at SIT and upto April 17th

ESA emphasised the importance of engaging with the private sector.

No 'push-back' on the the core idea of engaging, and of the industry workshop. No other concerns.



NOAA provided some important feedback on CEOS-ARD as a whole, i.e., that it is important to also address data policy, data formats, interoperability & etc.



Introduce new elements in the CARD framework?

1. Definition
2. PFS
3. Processes
4. Advisory notes?

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Target Outcomes from Engagement

Successful engagement with the private sector would lead to (2-3 year period):

- Industry and CEOS efforts on Analysis Ready Data are coordinated
- Private sector companies produce products according to CEOS Analysis Ready Data Specifications
- Specifications are improved through the involvement of industry expertise and viewpoints
- Stronger evidence base for the value of CEOS Analysis Ready Data / understanding of what is important to industry users.

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Recommendations from the Discussion Paper

- Establishing mechanisms for constructive and appropriate engagement with the private sector
- Avoid unnecessary barriers to participation (from industry) in the CARD discussion and processes (don't say 'no', without a clear reason).
- Provide appropriate documentation on CARD
- Identify a CEOS ARD framework process for assessing private data products for compliance with Specifications
- Move CEOS concepts into the broader 'standards' realm to include the private sector.

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Proposed Next Steps

- Continue to share Information on CEOS Analysis Ready Data to build support
 - Add supplementary materials such as videos, papers, presentations and the latest updates
- Understand the Industry Perspective;
 - Continue 'light touch' teleconferences and emails
 - Reach out to industry leaders for tactical advice and ideas including on how to run a workshop for industry
 - Convene a workshop with industry, in particular European industry
 - Leverage existing opportunities / meetings where possible, rather than creating our own
- Engage Industry in Specifications
 - Engage industry specialists in specifications working groups
 - Move CEOS specifications into the broader community

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Questions
Responding to questions in the chat
(discussion session is later)

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CARD4L PFS for High Resolution Datasets

S. Labahn

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High Resolution Datasets

- @ LSI-VC-8: KARI noted sub-10m ARD products are not addressed by the current CARD4L framework
 - KARI have produced some initial ARD based on CARD4L with sub-10m data from KOMPSAT.
 - There will be challenges in verification of fine resolution products to within CARD4L PFS parameters, but there may also be an opportunity to learn from KARI's experience.
- @ WGCV IVOS-32: It was recognized that we have currently targeted medium resolution observations and need exists to extend into higher resolution observations to better support CEOS (potential higher resolution future missions) and commercial entities
- As part of our commercial engagement, it seems that we may need some concentrated effort on ensuring the PFSs are applicable to the sub-10m products (perhaps along with commercial partners, a thorough review of each requirement)... and update the existing ones accordingly ...or create new ones²⁶

Questions

Responding to questions in the chat
(discussion session is later)

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Discussion

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Seed Questions / Discussion points

- JACIE and VH-RODA provide existing forums for key commercial entity interactions. IVOS already very plugged-in and perhaps LSI-VC could be as well. It may be more efficient for commercial entities as well, rather than introducing yet another forum/meeting for interacting with CEOS entities.
- As part of the overall CEOS ARD Strategy, is there a better construct to help organize these activities and keep all affected entities in-sync (including LSI-VC, IVOS, WGCV, and WGISS), and in particular our somewhat independent discussions with external/commercial entities? (perhaps SIT Chair Team led)

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Seed Questions

Q 1: Do we agree on the objectives of engagement with industry?

Q 2: Reflections on the proposed next steps

Q3: Is IVOS an appropriate forum for us to use or are they focussed on Cal-Val?
(Covered off by Nigel Fox - they can help with some parts, e.g., accuracy)

Q4: How should we take forward and share our interoperability work?

Q5: Do we need to adapt our specifications to support higher spatial resolution data?

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Seed Questions / Notes

Do we broaden CEOS ARD to include coverage of other important matters that are (intentionally) not included in the PFS? Data Policy, Accessibility, Format, Interoperability, Standards.

NOAA : "Section 3.2, Matters Not Covered in the Specifications" undermines the whole goal of ARD

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CEOS-Industry ARD Workshop Planning Session

Z. Szantoi

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Workshop Prospectus

- CEOS ARD impact will be amplified by augmentation with commercial data and platforms
- CEOS has sought to coordinate with the commercial sector.
 - Workshop organised to strengthen the dialogue
- Explore interfaces and cooperative activities to increase data use, choice and flexibility for users

Draft prospectus [here](#).

Key Topics - Objectives for the WS

- Roadmap for CEOS Agency ARD development
- Strategies to reach users, incl. with commercial sector to maximise impact
- Suitability of the CEOS ARD Specifications and Framework to commercial sector data providers and their customers, and interest in adopting the concept
- CEOS services for the validation of commercial ARD products
- CARD4L and new approaches (cloud hosting/processing, online analysis platforms, COG, STAC, machine learning, etc.)
- Strategies for coordinated global data flows
- Avoiding duplication of effort in this space
- Future directions for CEOS ARD

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Seed Questions / Notes

Required decision: our plan for this event now:

When do we do it?

Online or on site?

Go/No-Go point for face-to-face meeting?

Able to achieve what we wanted with a virtual workshop?

Whom to invite, based on what criteria (EARSC?)

- Compile a list of companies (geography focus)
- New contact from Planet

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