Revision of the VLab Strategy (2027-2030)

DRAFT: v1 (2026-05-21)

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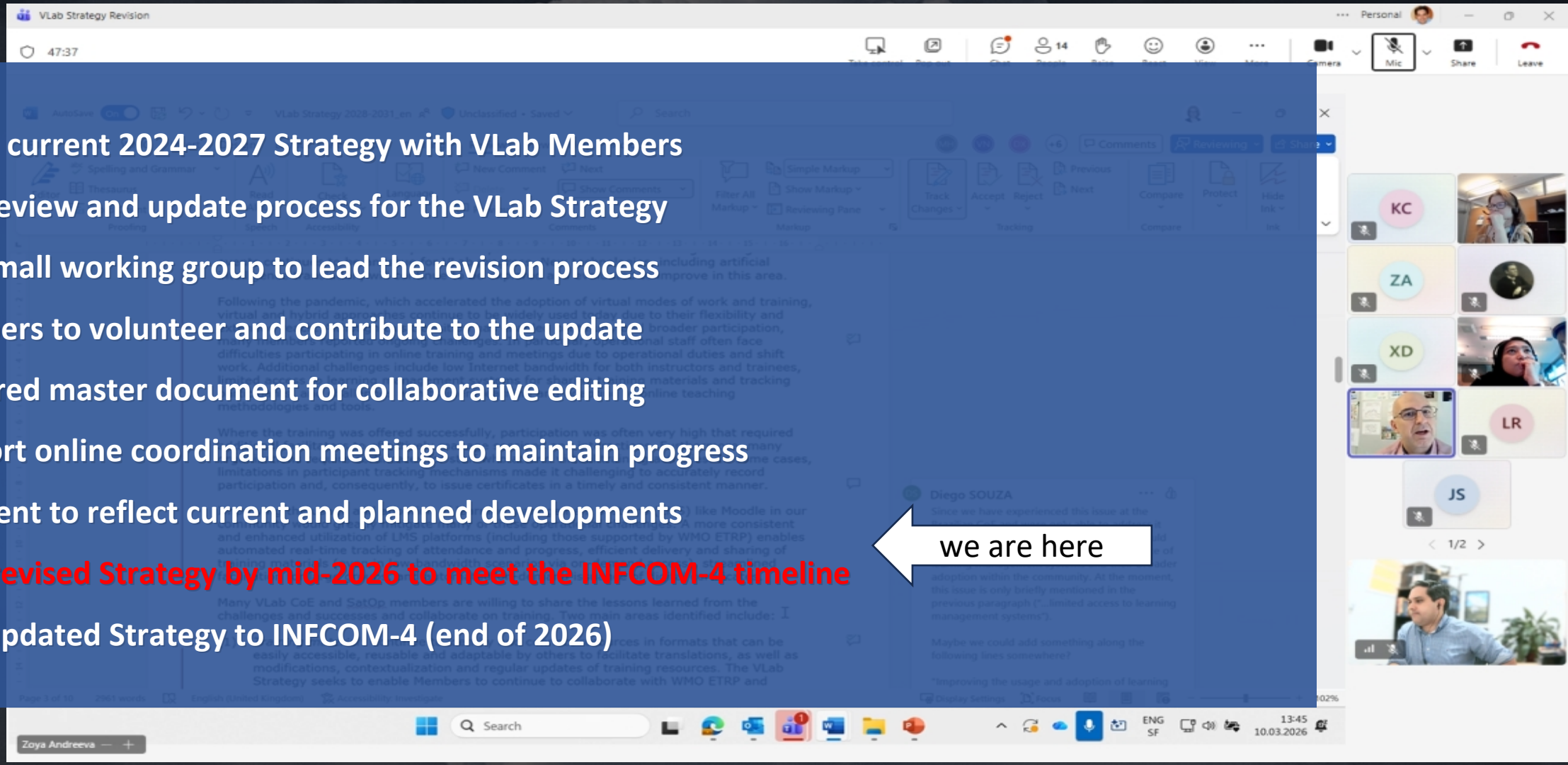
Steps for Updating the VLab Strategy

- Re-share the current 2024-2027 Strategy with VLab Members
- Launch the review and update process for the VLab Strategy
- Establish a small working group to lead the revision process
- Invite Members to volunteer and contribute to the update
- Create a shared master document for collaborative editing
- Organize short online coordination meetings to maintain progress
- Update content to reflect current and planned developments
- **Finalize the revised Strategy by mid-2026 to meet the INFCOM-4 timeline**
- Submit the updated Strategy to INFCOM-4 (end of 2026)

we are here



Purpose of the Revision

▪ Align with evolving needs	WMO priorities, technological advances, and post-pandemic realities
▪ Strengthen focus	on impact, sustainability, and emerging technologies
▪ Better support	EW4All, Earth System approach, and Members with limited resources
▪ Introduce clearer logic / impact pathway	and enhanced quality / evaluation framework
▪ Maintain core partnership model (CoEs + SatOps)	while increasing emphasis on reuse, communities of practice, and trainer development

Mission: Refined and Strengthened

Previous (2024 - 2027)

“To improve weather, water, climate and related environmental services by enabling WMO Members to utilize satellite data.”

New (2027 - 2030)

“To support protection of life and property and economic development through improved weather, climate, water, and related environmental services by enabling WMO Members to utilize satellite data in services and science, through coordinating and delivering education, training, and knowledge exchange.”

Key Improvement: Explicit link to protection of life/property, economic development, and science + clearer description of VLab’s coordination role.

Long-term Goals: Evolution

Common Elements

- Advance utilization of space-based WIGOS component
- Global knowledge sharing, especially for resource-limited Members

New Emphasis

"Continuously strengthen and advance the effective operational and scientific utilization…"

"Strengthen and sustain global capacity by building knowledge…" (stronger sustainability focus)

Strategic Objectives: Main Changes

Area	Old	New
Observing System	Vision 2040	Vision 2050
New Tech	Implicit	Explicit inclusion of AI/ML (Obj. 3)
Research Uptake	Obj. 2.2	Strengthened as Obj. 4
Services	IDSS, GFCS	Broader “related environmental applications”
Competence	Obj. 2.5	Obj. 7 – acknowledges staffing/resource constraints

Overall: More forward-looking, integrates AI/ML, and tightens alignment with Earth System and operational realities.

Challenges and Areas for Improvement

Persistent Challenges (both strategies)

- Trainer & staff shortages
- Language barriers & translation needs
- Limited resources & bandwidth
- High participation demanding more facilitators
- Certificate issuance difficulties

New / Enhanced Points

- Operational staff availability (shift work) remains a major barrier
- Strong push for Learning Management Systems (LMS) (e.g., Moodle) for tracking, materials access, and automated certificates
- Emphasis on Training-of-Trainers, peer learning, and pedagogical development
- CoEs must actively report regional barriers via Satellite Data Requirements Groups and Regional Associations

VLab Strategic Approaches (2027-2030)

Key Implementation Pillars (refined):

- Identify regional needs & prioritize interventions
- Develop/share/reuse training linked to competencies
- Evaluate impact of training (stronger focus)
- Promote materials in multiple languages + AI translation
- Engage next generation & interdisciplinary early-career professionals
- Promote mentoring & communities of practice
- Support via VLab Trust Fund (expanded: conferences, visiting scholars, scientific activities)

New Activity Emphasis: Dedicated opportunities for students/early-career at user conferences.

Particular Attention 2027-2030 (New Priorities)

Service & Capacity Focus

- Impact-based forecasting & IDSS
- Advancing EW4All: tailored training for “Monitoring & Forecasting” pillar
- Technical capacity (reception & processing)
- Earth System approach (interdisciplinary
- Space Weather (continued cooperation)

Emerging Technologies

- AI / ML (responsible use)
- Big Data & Cloud Platforms
- Immersive tools (VR / AR)

Delivery: Innovative methods, outreach to academia, data platforms/notebooks.

Quality Control and Evaluation: Major Upgrade

Previous (2024 - 2027)

Internal evaluations + annual reviews focused on priorities

New (2027 - 2030) - Under Discussion / Preliminary Ideas

- ***Standardized approach across all CoEs***
- ***Common evaluation indicators***
- ***Move beyond "number of events" → impact, relevance, outcomes***
- ***Measure contribution to improved capabilities & satellite data usage***
- ***Procedures for consistency and continuous improvement***

Collaboration and Resources

Strengthened Elements

- Deeper integration with WMO Global Campus & ETRP
- Co-development of materials & communities of practice
- Cross-disciplinary relationships & WMO Competency Frameworks
- Discoverability, interoperability, and reuse of resources

Resources

- Continued reliance on CoEs + SatOps
- Critical role of Technical Support Officer (TSO)
- Sustained VLab Trust Fund support from CGMS Operators

New Annex: VLab Logic Map (Impact Pathway)

Long-term Societal Impacts (beyond direct VLab scope)

1. Protection of life and property
2. Economic resilience
3. Improved Earth system understanding

Outcomes VLab Supports

- Enhanced use of satellite data in warnings (nowcasting → seasonal)
- Environmental risk information & indices
- Earth system science (reanalysis, research)

VLab Role: Education/training, best practices, right tools for right tasks.

Summary of Key Revisions

What's New / Strengthened

- Clearer impact-oriented language & Logic Map
- Explicit AI/ML, VR/AR, cloud, EW4All focus
- Stronger LMS adoption and trainer development
- Enhanced evaluation of training impact
- Greater emphasis on early-career, academia, and communities of practice
- Updated WIGOS Vision (2050) and broader environmental scope

Continuity

- Core partnership model (CoEs + SatOps)
- Inclusiveness, collaboration, and support for developing Members
- Regional focus and user-driven training

Next Steps and Recommendations

- **Align Regional Training Plans** with 2027-2030 strategic priorities
- **Expand Contributions** to the WMO Global Campus
- **Pilot Innovative Tools** for enhanced LMS use and AI-supported translation
- **Develop Common Metrics** for impact evaluation and assessment
- **Secure Sustainable Funding** through continued Trust Fund contributions
- **Prepare for Implementation** discussions within the next VLMG meetings

VLab remains essential for turning satellite investments into operational and scientific benefits for all WMO Members.

Thank you.

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