Horizon Europe Cluster 5 2026-2027

We have sorted the calls for projects from Horizon Europe Cluster 5 2026-2027 according to the impact that microfluidics can have on the calls for projects and related topics. We are sharing our analysis in case it can help you with project funding efforts. And, of course, if our expertise can be of use to you, we would be delighted to discuss it further.

How to read the stars in terms of the % of microfluidic technologies' relevance for the call:

By microfluidic relevance, we mean the relevance of using microfluidic technologies for the topic cited. But also, to a lesser extent, what a microfluidic laboratory or SME could contribute to the topic (mainly for calls with low relevance to microfluidic technologies).

Relevance (%)	90-100	80-89	70-79	60-69	50-59	40-49	30-39	20-29	10-19	0-9
Relevance (*)	*****	****	***	**	*	–	– –	– – –	– – – –	– – – – –

Administrative dates and destinations per call:

- **Call 03-2026** (Opening 19 Dec 2025 / Deadline 31 Mar 2026): topic-wise budgets for D2 & D3.
- **Call 05-2026 & 07-2026** (Opening 18 Dec 2025 / Deadline 14-15 Apr 2026): D2-03 & D1-01…D1-05.
- **Call 06-2026 & 08-2026 (2-stage)** (Opening 18 Dec 2025 / Deadlines 14 Apr 2026 & 08 Oct 2026): D5-07, D5-10, D5-20 & D1-06.
- **Call 09-2026** (Opening 05 May 2026 / Deadline 10 Sep 2026): D3 & D4 topics and **CID-1**.
- **Call 10-2026** (Opening 04 Jun 2026 / Deadline 08 Oct 2026): D5 & D6 topics.
- **Call 01-2027** (D1 topics 2027): see destination list.

- **Call 03-2027 & 05-2027** (Opening 15 Dec 2026 / Deadline 14 Apr 2027): D2-05, D2-06, D3-09…D3-11, D3-16, D3-25, D3-31, D3-32, and D5 & D6 topics
- **Call 06-2027 (2-stage)** (Opening 15 Dec 2026 / Deadlines 14 Apr 2027 & 07 Oct 2027): D2-07 + aviation noise.
- **Call 07-2027** (Opening 07 May 2026 / Deadline 09 Sep 2027): PV/Grids/Storage/CCUS/D4 heat topics + **CID-2**.
- **Call 08-2027** (Opening 03 Jun 2027 / Deadline 07 Oct 2027): Waterborne D5-15…D5-19.

Quick picking guide (what microfluidics should target first)

1. **Thermal management & heat recovery**
    - D4-06 (IT rooms/edge DCs) → **flagship** fit for microfluidics 's micro-cooling & heat-upgrade IP.
    - D4-08 / D4-09 (industrial heat upgrade & WH2P) → micro-HX and compact heat-pump components.
2. **Battery manufacturing / durability / LDBES**
    - D2-03, D2-06, D2-01, D2-02, D2-08; plus waterborne **D5-18** and road **D5-01 / D5-05 / D5-06** for systems integration and safety.
3. **CCUS & DAC**
    - D3-31 (DAC), D3-30 (aquifer appraisal), D3-33 (industrial clusters) → lab-on-chip porous media, micro-contactors and sensorised capture modules.
4. **PV manufacturing**
    - D3-14 / D3-16 / D3-13 / D3-15 / D3-17 / D3-18 → flow-chemistry inks, micro-coating control, reliability sealing.

******* HORIZON-CL5-2027-07-D4-06 - THERMAL ENERGY OPTIMISATION AND WASTE HEAT RECOVERY OF HIGH ENERGY DEMAND IT ROOMS IN BUILDINGS OR SMALL EDGE DATA CENTRES**

- **Type of action:** IA
- **Budget (topic, M€):** 16.50. **Expected EU contribution per project (M€):** ~5.50. **# projects:** 3.
- **Scientific focus:** Demonstrate solutions in real buildings/edge data centres to **cut cooling energy use**, **recover/upgrade waste heat** and **optimise whole-system energy flows** around IT rooms; emphasis on integration, monitoring, control and replicability in EU building stock.
- **Why microfluidics:**
    - **Micro-channel cold plates & heat exchangers** to increase heat flux removal and reduce pump power in high-density racks.
    - **Two-phase microfluidic cooling** architectures for hotspots and chip-level thermal management.
    - **Compact heat-pumps/micro-evaporators** enabling higher-temperature waste heat recovery for DHW/low-temp networks.
    - **Real-time flow sensing & model-based control** (µ-sensors integrated in coolant loops) to minimise exergy losses.
    - **Retrofit kits** for edge sites (standardised manifolds, quick-connect microchannels) to accelerate replication across facilities.

******* HORIZON-CL5-2026-05-D2-03 - INTEGRATED PRODUCTION AND PRODUCT DEVELOPMENT FOR NEXT-GENERATION LITHIUM-BASED BATTERIES FOR MOBILITY (BATT4EU & MADE IN EUROPE)**

- **Type of action:** IA
- **Budget (topic, M€):** 105.00. **Expected/project:** ~35.00. **# projects:** 3.
- **Scientific focus:** Integrate **cell manufacturing innovations** with **vehicle-level product development** to shorten time-to-industrialisation of new Li-battery generations; tight coupling of **process, quality, design**, and **sustainability by design** across the value chain.
- **Why microfluidics:**
    - **Microreactor synthesis of active materials** (precursors, coatings) for narrow PSD and high batch-to-batch reproducibility.
    - **In-line microfluidic QC** (ink/slurry rheology, solvent ratio, contaminant detection) feeding process control.
    - **Micro-patterned current collectors** and **micro-porous separator engineering** to improve ion transport and fast-charge tolerance.
    - **Thermal management at module level** using micro-channel plates compatible with MCS/megawatt charging profiles.

******HORIZON-CL5-2027-03-D2-06 - SUSTAINABLE AND COMPETITIVE CELL PRODUCTION TECHNIQUES FOR LITHIUM-ION AND SODIUM-ION BATTERIES (BATT4EU)**

- **Type of action:** IA
- **Budget (topic, M€):** 40.00. **Expected/project:** ~20.00. **# projects:** 2.
- **Scientific focus:** Scale **innovative cell manufacturing routes** (incl. sodium-ion), productivity and quality by design, lowering energy use and **toxic solvents**, and increasing EU competitiveness.
- **Why microfluidics:**
    - **Solvent-free & water-based slurry control** via micro-mixers delivering precise dispersion/viscosity windows.
    - **In-situ microfluidic metrology** for coating uniformity/porosity; **micro-imprint texturing** of electrodes for improved kinetics.
    - **Flow-cell testbeds** for rapid degradation/fast-charge stress mapping.

****** HORIZON-CL5-2026-03-D2-01 - PRODUCING BATTERY-GRADE MATERIALS FOR ELECTRODES THROUGH SUSTAINABLE PROCESSING/REFINING OR BIO-BASED MATERIALS (BATT4EU)**

- **Type of action:** RIA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~7.50. **# projects:** 4.
- **Scientific focus:** Develop **sustainable refining/processing** routes for battery-grade electrode materials or **bio-based alternatives**, targeting EU strategic autonomy, cost and eco-impact reductions.
- **Why microfluidics:**
    - **Continuous-flow microreactors** for controlled precipitation/coating/etching with improved yield and reduced solvent use.
    - **Lab-on-chip screening** of leaching/solvent extraction systems; accelerated residence-time optimisation.
    - **Inline spectro-fluidic analytics** (UV-vis/Raman) for purity control.

****** HORIZON-CL5-2026-03-D2-02 - DEVELOPMENT OF DIRECT RECYCLING PROCESSES (BATT4EU)**

- **Type of action:** RIA
- **Budget (topic, M€):** 15.00. **Expected/project:** ~5.00. **# projects:** 3.
- **Scientific focus: Direct recycling** and reconditioning of active materials (avoiding full re-synthesis), minimising energy/chemical footprints and preserving cathode microstructure/performance.
- **Why microfluidics:**

- **Selective particle re-lithiation/coating** in microreactors; **fractionation** of black mass using micro-hydrodynamics.
- **On-chip failure/aging diagnostics** to direct parts to reuse vs. regenerate vs. recycle.

****** HORIZON-CL5-2027-07-D2-08 - DEMONSTRATION FOR LONG-DURATION BATTERY ENERGY STORAGE SYSTEMS (BATT4EU)**

- **Type of action:** IA
- **Budget (topic, M€):** 20.00. **Expected/project:** ~10.00. **# projects:** 2.
- **Scientific focus:** Full-scale **LDBES** demonstrations (e.g., novel battery chemistries, systems, and controls) supporting grid/industrial use cases with high reliability and circularity.
- **Why microfluidics:**
  - **Flow-battery architectures** and **micro-channel electrodes** to reduce shunt currents/pressure drops.
  - **Membrane/SEI conditioning in micro-cells** for durability screening.
  - **Thermal plates & distributed sensing** for performance/safety at long duration.

***** HORIZON-CL5-2027-08-D5-18 - ENHANCED ELECTRIC OPERATION AND BATTERY DURABILITY (ZEWT)**

- **Type of action:** IA
- **Budget (topic, M€):** 20.00. **Expected/project:** ~10.00. **# projects:** 2.
- **Scientific focus**: Demonstrate **fully-battery-electric waterborne** solutions with **≥150 nm** autonomy and **>5 MW peak propulsion**, fast charging, optimised energy architecture, and **battery lifetime/safety** in maritime conditions.
- **Why microfluidics:**
  - **High-power thermal management** (micro-channel plates, phase-change micro-loop heat sinks).
  - **On-board microfluidic BMS sensors** (gas, electrolyte decomposition markers) for predictive maintenance.
  - **On-chip fast-charge degradation studies** under salt-mist/thermal cycling representative of maritime use.

***** HORIZON-CL5-2026-09-D4-08 - FULL-SCALE DEMONSTRATION OF HEAT UPGRADE SOLUTIONS IN INDUSTRIAL PROCESSES**

- **Type of action:** IA
- **Budget (topic, M€):** 19.00. **Expected/project:** ~9.50. **# projects:** 2.
- **Scientific focus: Industrial heat-upgrade** (e.g., high-lift heat pumps, recuperators) demonstrated at full scale to decarbonise process heat demand and enable cross-site waste-heat valorisation.
- **Why microfluidics:**
  - **Micro-heat-exchanger cores** with high UA/compactness for low-GWP working fluids.
  - **Micro-evaporators/condensers** improving COP and partial-load stability.
  - **Embedded flow/temperature sensor networks** for digital twins and control.

***** HORIZON-CL5-2027-03-D3-31 - ADVANCEMENTS IN DIRECT AIR CAPTURE**

- **Type of action:** RIA
- **Budget (topic, M€):** 18.00. **Expected/project:** ~9.00. **# projects:** 2.
- **Scientific focus:** New **DAC materials, contactors, and process intensification** to reduce energy penalty and costs; integration pathways and environmental performance.
- **Why microfluidics:**
  - **Micropacked contactors & intensification** (short diffusion paths, high a/V).
  - **Microreactor regeneration studies** for novel sorbents/solvents under rapid thermal or moisture swings.
  - **On-chip capture kinetics** & mass-transfer mapping to accelerate materials down-selection.

***** HORIZON-CL5-2027-07-D3-33 - DELIVERY OF INDUSTRIAL CCUS CLUSTERS - SOCIETAL READINESS PILOT**

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~10.00. **# projects:** 3.
- **Scientific focus:** Deploy **cluster-scale CCUS** with societal-readiness measures, data-driven decision-making, permitting, and cross-value-chain coordination.
- **Why microfluidics:**
  - **Lab-on-chip porous-media analogues** to de-risk injection/transport—capillary trapping, wettability, leakage detection.
  - **Microreactor capture modules** for integration with industrial emitters and **sensorised** monitoring of impurities.

***** HORIZON-CL5-2026-10-D5-01 - LARGE-SCALE DEMONSTRATION OF HEAVY-DUTY BATTERY ELECTRIC VEHICLES (HD BEV) TOWARDS LONG-HAUL LOGISTICS**

- **Type of action:** IA
- **Budget (topic, M€):** 68.00. **Expected/project:** ~34.00. **# projects:** 2.
- **Scientific focus:** Demonstrate **long-haul HD-BEV** with **MCS-compatible** charging, vehicle/route energy optimisation, and fleet-level operations.
- **Why microfluidics:**
  - **Battery pack thermal plates & manifolds** for ultra-fast charge heat extraction.
  - **Microfluidic safety sensors** (off-gas, HF) to mitigate thermal runaway during MCS events.
  - **On-board coolant conditioning** modules to stabilise viscosity/conductivity at high currents.

***** HORIZON-CL5-2026-09-D3-30 - PRE-COMMERCIAL APPRAISAL FOR CO_2 AQUIFER STORAGE**

- **Type of action:** IA
- **Budget (topic, M€):** 25.00. **Expected/project:** ~5.00. **# projects:** 5.
- **Scientific focus:** De-risk **saline aquifer storage** through site appraisal, characterization, and monitoring - including injectivity, integrity, and long-term containment.
- **Why microfluidics:**
  - **Pore-scale flow experiments** in micro-fabricated rock analogues to calibrate reservoir models.
  - **Chip-based geochemical reactivity tests** (brine-CO_2-rock) under pressure/temperature transients.

**** HORIZON-CL5-2027-07-D4-09 - DEMONSTRATION OF INDUSTRIAL EXCESS/WASTE HEAT CONVERSION TO MECHANICAL OR ELECTRICAL POWER**

- **Type of action:** IA
- **Budget (topic, M€):** 14.00. **Expected/project:** ~7.00. **# projects:** 2.
- **Scientific focus:** Demonstrate **waste-heat-to-power** (e.g., ORC/Brayton variants, thermoelectrics) integrated in industrial sites; performance, safety, and business models.
- **Why microfluidics:**
  - **Micro-evaporators/expanders** with high heat-transfer coefficients at low ΔT.
  - **Modular micro-HX arrays** for fouling-prone industrial exhausts.

**** HORIZON-CL5-2027-07-D3-28 - INTEGRATED APPROACHES FOR RETROFITTING INFRASTRUCTURES WITH INNOVATIVE ENERGY STORAGE TECHNOLOGIES**

- **Type of action:** IA
- **Budget (topic, M€):** 24.00. **Expected/project:** ~8.00. **# projects:** 3.
- **Scientific focus:** Retrofit **critical infrastructures** with **innovative storage** (electrical/thermal), validated in operations with interoperable control and safety.
- **Why microfluidics:**
  - **Thermal storage modules** using micro-channel PCM encapsulation.
  - **Compact battery thermal loops** with µ-sensors for aging-aware dispatch.

**** HORIZON-CL5-2027-03-D3-16 - PRODUCTION TECHNOLOGIES FOR SOLAR PHOTOVOLTAICS BEYOND THE STATE-OF-THE-ART (EUPI-PV)**

- **Type of action:** IA
- **Budget (topic, M€):** 39.00. **Expected/project:** ~13.00. **# projects:** 3.
- **Scientific focus:** Advance **EU PV production** (e.g., tandem, high-efficiency cells/modules) with scalable equipment and reduced critical materials.
- **Why microfluidics:**
  - **Microfluidic deposition/ink delivery** for perovskite/transport layers.
  - **Flow-chemistry synthesis** of nano-inks and encapsulants with real-time QA.

**** HORIZON-CL5-2026-03-D3-14 - INDUSTRIAL PROCESSES & EQUIPMENT FOR INNOVATIVE, RELIABLE & SCALABLE TANDEM TECHNOLOGIES (EUPI-PV)**

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~10.00. **# projects:** 3.
- **Scientific focus: Manufacturing routes & tools** for tandem PV with reliability and scale.
- **Why microfluidics:** Micro-metre-scale **coating/annealing control** and **micro-patterned wettability** to improve film uniformity and yield.

**** HORIZON-CL5-2026-09-D3-15 - IMPROVED SYSTEM DESIGN FOR INNOVATIVE PV APPLICATIONS (EUPI-PV)**

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~7.50. **# projects:** 4.
- **Scientific focus:** Innovative PV **system integration** (architectural/industrial), reliability, circularity.

- **Why microfluidics: Encapsulant/adhesive flow processing** and **edge-seal micro-barriers** against moisture ingress.

*** HORIZON-CL5-2026-10-D5-11 - SCALABILITY OF SOLID OXIDE FUEL CELLS FOR WATERBORNE TRANSPORT (ZEWT + CLEAN HYDROGEN JU)**

- **Type of action:** RIA
- **Budget (topic, M€):** 16.00. **Expected/project:** ~8.00. **# projects:** 2.
- **Scientific focus:** Scale **SOFC** solutions for maritime, addressing durability, system integration, and safety.
- **Why microfluidics: Micro-channel reformers/steamers** and **high-temp micro-HX** for compact balance-of-plant; **on-chip degradation diagnostics**.

*** HORIZON-CL5-2026-03-D3-22 - NOVEL SOLUTIONS FOR OFF-GRID STORAGE OF RENEWABLE ENERGY FOR CRITICAL INFRASTRUCTURES**

- **Type of action:** IA
- **Budget (topic, M€):** 12.00. **Expected/project:** ~4.00. **# projects:** 3.
- **Scientific focus:** Demonstrate **off-grid storage** packages with resilience/black-start for critical sites.
- **Why microfluidics:** Pack-level **micro-thermal loops** and **multiphysics sensors** for reliability in harsh environments.

*** HORIZON-CL5-2026-03-D3-21 - HYBRID AI-CONTROL FRAMEWORK FOR A NEXT-GENERATION GRID-SCALE ENERGY STORAGE AND SYSTEM INTEGRATION**

- **Type of action:** IA
- **Budget (topic, M€):** 14.00. **Expected/project:** ~7.00. **# projects:** 2.
- **Scientific focus:** AI-based control/dispatch for grid-scale storage, integrating hardware constraints.
- **Why microfluidics:** Interface **cell-level thermal/electrochemical sensors** to AI controllers—data streams grounded in micro-scale phenomena.

*** HORIZON-CL5-2027-05-D5-05 - HIGHER VOLTAGE, MCS-COMPATIBLE, MODULAR POWERTRAIN FOR HEAVY DUTY VEHICLES**

- **Type of action:** IA
- **Budget (topic, M€):** 40.00. **Expected/project:** ~20.00. **# projects:** 2.
- **Scientific focus:** Modular **HV powertrains** compatible with **Megawatt Charging System**, safety, and interoperability.
- **Why microfluidics: Dielectric coolant micro-manifolds**, **safety sensing micro-chips** for early venting/off-gas detection during ultra-fast charging.

*** HORIZON-CL5-2026-03-D3-13 - LONG-LIFETIME & OPTIMISED USE OF MATERIALS IN RECYCLABLE Ag & In-FREE Si PV MODULES (EUPI-PV)**

- **Type of action:** RIA
- **Budget (topic, M€):** 15.00. **Expected/project:** ~5.00. **# projects:** 3.
- **Scientific focus:** Materials and module design targeting **recyclability** and **precious metal-free** BOM.
- **Why microfluidics: Micro-patterned busbar pastes** and **directed-flow encapsulation** to minimize material usage and defects.

– HORIZON-CL5-2027-05-D5-06 - FIRE PREVENTION AND MITIGATION FOR EVs IN CONFINED AREAS

- **Type of action:** RIA
- **Budget (topic, M€):** 10.00. **Expected/project:** ~5.00. **# projects:** 2.
- **Scientific focus:** Mitigate EV fire risks in **garages, tunnels, and ships**; detection, suppression, and response.
- **Why microfluidics: Early gas/thermal plume sensing** and **micro-spray/foam delivery** systems for fast knock-down.

– HORIZON-CL5-2026-06-TWO-STAGE-D5-20 - NON-EXHAUST EMISSIONS IN ROAD AND RAILWAY TRANSPORT

- **Type of action:** RIA (2-stage)
- **Budget (topic, M€):** 7.00. **Expected/project:** 3.50-4.00. **# projects:** 2.
- **Scientific focus:** Quantify/mitigate **tyre, brake, track** emissions; methods, abatement, and policy inputs.
- **Why microfluidics: Portable microfluidic samplers** and **lab-on-chip toxicology** for ultrafine particulates in situ.

– HORIZON-CL5-2027-05-D5-21 - ASSESSING THE EFFECT OF AIRPORT OPERATIONS ON AIR QUALITY AND NOISE IN NEARBY COMMUNITIES

- **Type of action:** RIA
- **Budget (topic, M€):** 7.00. **Expected/project:** ~3.50. **# projects:** 2.
- **Scientific focus:** Integrated **air-quality/noise** modelling and measurements around airports, exposure & mitigation.
- **Why microfluidics: µ-gas analysers** (NOx, VOCs) and **aerosol chips** for near-real-time curb-to-community exposure maps.

– HORIZON-CL5-2027-08-D5-19 - ONBOARD RENEWABLE ENERGY SOLUTIONS & ENERGY-SAVING MEASURES TO REDUCE FUEL BY ≥55% (ZEWT)

- **Type of action:** RIA
- **Budget (topic, M€):** 15.00. **Expected/project:** ~7.50. **# projects:** 2.
- **Scientific focus: Integrated** retrofit/newbuild packages combining renewable energy and efficiency measures; verification frameworks and safety.
- **Why microfluidics: Micro-HX retrofits** for auxiliary loads and **µ-sensors** for energy-efficiency monitoring.

– HORIZON-CL5-2027-08-D5-17 - INNOVATIVE SOLUTIONS FOR MITIGATING THE ENVIRONMENTAL IMPACT OF WATERBORNE TRANSPORT (ZEWT)

- **Type of action:** RIA
- **Budget (topic, M€):** 14.00. **Expected/project:** ~7.00. **# projects:** 2.
- **Scientific focus:** Reduce **air/water impacts** of renewable/low-carbon fuels and operations; abatement systems; skills.
- **Why microfluidics: On-chip water toxicity assays** and **µ-sensor arrays** for ammonia/NOx/BC co-emissions during trials.

– – HORIZON-CL5-2026-09-D2-04 - COORDINATED TOPIC WITH INDIA ON RECYCLING OF EV BATTERIES

- **Type of action:** IA
- **Budget (topic, M€):** 10.00. **# projects:** 1.
- **Scientific focus:** Joint EU-India **EV battery recycling** demonstration/scale-up.
- **Why microfluidics:** Provide **lab-to-pilot microreactor lines** and **analytical chips** to validate recycling steps with lower solvent/energy footprints.

– – HORIZON-CL5-2027-07-D3-17 - INDUSTRIAL SCALE-UP & CIRCULARITY PATHWAY FOR IPV TECHNOLOGIES (EUPI-PV)

- **Type of action:** IA
- **Budget (topic, M€):** 36.00. **Expected/project:** ~12.00. **# projects:** 3
- **Scientific focus:** Industry scale-up and **circularity** for **industrial PV (IPV)** technologies.
- **Why microfluidics: Low-waste deposition** and **closed-loop chemical processing** modules.

– – HORIZON-CL5-2027-07-D3-18 - PV-BASED ELECTRIFICATION OF THE ECONOMY: DESIGNING & OPTIMISING PV SYSTEMS SUPPORTING INDUSTRIAL ELECTRIFICATION (EUPI-PV)

- **Type of action:** IA
- **Budget (topic, M€):** 18.00. **Expected/project:** ~6.00. **# projects:** 3.
- **Scientific focus:** Design/optimise PV systems for **industrial electrification & market participation**.
- **Why microfluidics:** Limited; potential for **advanced cooling/encapsulation** R&D in harsh industrial settings.

– – HORIZON-CL5-2027-03-D3-25 - LARGE-SCALE OPERATIONAL VALIDATION OF (GENERATIVE) AI TOOLS FOR NEXT-GEN DIGITAL ENERGY SYSTEM

- **Type of action:** IA
- **Budget (topic, M€):** 26.00. **Expected/project:** ~13.00. **# projects:** 2.
- **Scientific focus:** Operational **AI for energy systems**.
- **Why microfluidics:** Indirect - **sensor integration** from micro-scale devices to data lakes.

– – HORIZON-CL5-2027-07-D3-26 - ADVANCED TSO CONTROL ROOMS TO ENHANCE GRID OBSERVABILITY, STABILITY & RESILIENCE

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~10.00. **# projects:** 3.
- **Scientific focus:** TSO operations digitalisation.
- **Why microfluidics:** Low direct fit; potential **grid-scale battery thermal telemetry** inputs.

– – HORIZON-CL5-2027-07-D3-27 - ADVANCED DISTRIBUTION MANAGEMENT SYSTEMS (ADSM)

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~10.00. **# projects:** 3.
- **Scientific focus:** DSOs digitalisation. **Why microfluidics:** Minimal.

– – – HORIZON-CL5-2026-09-D3-24 - DATA SHARING TO SUPPORT TRAINING/DEVELOPMENT OF AI FOUNDATION MODELS IN ENERGY

- **Type of action:** IA
- **Budget (topic, M€):** 30.00. **Expected/project:** ~10.00. **# projects:** 3.
- **Scientific focus: Data sharing** for AI in energy. **Why microfluidics:** Limited; provide **micro-sensor datasets** as niche contribution.

– – – HORIZON-CL5-2026-03-D3-19 - GRID-FORMING CAPABILITIES FOR RES-BASED GRIDS

- **Type of action:** IA | **Budget:** 20.00 M€ | **# projects:** 2
- **Why microfluidics:** Indirect (interface **thermal telemetry** in storage converter

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– – – HORIZON-CL5-2026-03-D3-20 - AFFORDABLE & SUSTAINABLE PRIMARY EQUIPMENT FOR FUTURE-READY MULTI-TERMINAL HVDC SYSTEMS

- **Type of action:** IA | **Budget:** 24.00 M€ | **Expected/project:** 4.00-12.00 M€ | **# projects:** 3

– – – – HORIZON-CL5-2027-03-D3-10 - INNOVATIVE TECHNOLOGIES & SOLUTIONS TO IMPROVE WAVE AND TIDAL ENERGY SYSTEMS

- **Type of action:** IA | **Budget:** 45.00 M€ | **# projects:** 1
- **Why microfluidics:** Very low; niche **sensor packaging** for harsh seawater possible.

– – – – HORIZON-CL5-2027-03-D3-09 - CO-FUNDING SET-PLAN RENEWABLE FUEL VALUE CHAINS

- **Type of action:** COFUND | **Budget:** 30.00 M€ | **# projects:** 1
- **Why microfluidics:** Very low direct fit.

Clean Industrial Deal - cross-cutting (potential horizontal plays for microfluidics)

– CID-1-2026 - R&I IN SUPPORT OF THE CLEAN INDUSTRIAL DEAL: CLEAN TECHNOLOGIES FOR CLIMATE ACTION

- **Type of action:** IA
- **Budget (topic, M€):** 150.00. **Expected/project:** 15.00-25.00. **# projects:** 8.
- **Focus: Fit-for-deployment** clean-tech demonstrators bridging to **Innovation Fund**, industrial decarbonization, and clean manufacturing.
- **Why microfluidics: Micro-manufacturing equipment** (microreactors, micro-HX) as enabling tech inside clean-tech value chains (batteries, heat pumps, CCUS capture units).

– CID-2-2027 - R&I IN SUPPORT OF THE CLEAN INDUSTRIAL DEAL: CLEAN TECHNOLOGIES FOR CLIMATE ACTION

- **Type of action:** IA
- **Budget Expected/project (M€):** 15-25 M€. **# projects:** 8.
- **Focus: bottom-up, industry-led** demonstrators ready for deployment; portfolio balance across clean-tech areas.
- **Why microfluidics:** microfluidics' micro-fabrication/thermal & chemical process intensification can be **embedded subsystems** in deployment-ready demonstrators.

Note on additional topics:
The CL5 2026-2027 contains **~100 topics** across Destinations D1-D6. Above, this page fully details the highest-relevance set for microfluidics and provides compact entries for additional energy/transport topics where microfluidics is a secondary enabler. Many remaining topics are **policy, modelling, social sciences, or digital-only** (e.g., D1 climate science, D6 CCAM policy/AI/urban mobility). For these, microfluidics' fit is ≤30%.