

TOBIASZ MAYER

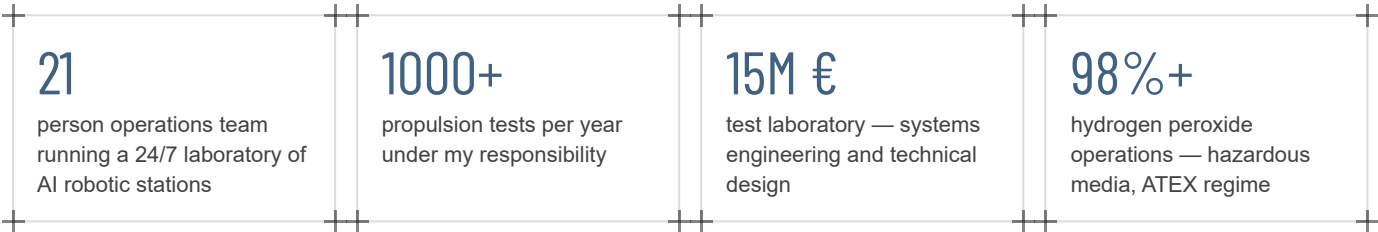
ENGINEERING OPERATIONS LEADER — 24/7 LABORATORIES & TEST FACILITIES

Warsaw, Poland +48 782 525 519 tobiasmayer@gmail.com linkedin.com/in/tobiasz

SECURITY CLEARANCE — NATO SECRET · ESA SECRET · EU SECRET, VALID TO 2030

PROFILE

Engineering operations leader with 9+ years of experience running high-risk, high-availability technical facilities — from experimental rocket propulsion test laboratories to a 24/7 AI robotics validation site. I build operating organisations from the ground up: procedures, work instructions, work standards, competency requirements and training paths, alongside the infrastructure itself. I have taken new laboratories from design documentation through commissioning into routine operation, work daily with technical and regulatory documentation (ECSS, ISO, ATEX, 98%+ hydrogen peroxide handling regimes), and have led facilities through the transition from project phase to steady-state operation with interdisciplinary teams, technology suppliers and external contractors.



PROFESSIONAL EXPERIENCE

Senior Lab Operations Manager & Field Operations Manager

Apr 2025 — present

NOMAGIC, WARSAW · LAB OPERATIONS MANAGER, THEN FIELD OPERATIONS MANAGER (DEC 2025), SENIOR LAB OPERATIONS MANAGER (SEP 2026)

- Own the operation of a 24/7 robotics laboratory: shift organisation, availability, change tracking, maintenance planning and component servicing for 13 robotic systems.
- Lead a multi-level, 21-person operations team (4 direct reports) including robot QA specialists and lead operations specialists; define competency requirements, development paths and the training programme for new operators.
- Author and maintain operating documentation — work instructions, safety procedures, operating standards; implemented 5S and continuous-improvement practice as the laboratory work standard.
- Run continuous evaluation of robot control software: ~50 validation runs per week across several engineering teams, supporting weekly releases to robots working at customer warehouses (CI/CD process).
- Built the Field Operations team from scratch for the customer ramp-up phase — recruitment, goals and scope, onboarding and training, operating processes, cooperation with external service partners.
- Support sales, customer and investor processes by making the laboratory a place where the product is demonstrated and tested in realistic conditions.

Head of Rocket Propulsion Test Section

Mar 2022 — Mar 2025

ŁUKASIEWICZ RESEARCH NETWORK — INSTITUTE OF AVIATION, CENTER OF SPACE TECHNOLOGIES

- Led a section of 15–16 engineers, technicians and researchers operating one of Europe's most advanced rocket propulsion test facilities; accountable for over 1000 propulsion tests annually (monopropellant, bipropellant, solid and hybrid systems).
- Accountable for personnel safety in a high-risk environment: risk analyses, FMEA, operating and emergency procedures, safety training, and safety culture across the site.
- Responsible for infrastructure operation and maintenance — hardware and software — as well as its further development.
- Systems engineering and review of design documentation (requirements, specifications, P&ID, FMEA) for a new vacuum propulsion test laboratory of over 15M EUR.
- Managed the project of a new mobile propulsion test laboratory (1.7M PLN) from concept through infrastructure delivery.
- Budget planning, recruitment, reporting and appraisals; process creation and implementation; knowledge transfer and team training planning.
- Cooperation with technology partners, contractors and clients — ESA projects, space startups and established industry; interface management and new partner acquisition.

Propulsion Test Laboratory Coordinator

Jan 2021 — Mar 2022

ŁUKASIEWICZ RESEARCH NETWORK — INSTITUTE OF AVIATION, CENTER OF SPACE TECHNOLOGIES

- Coordinated day-to-day operation of the propulsion test laboratory: long- and short-term work planning, test campaign scheduling, readiness of installations and crews (approx. 6 test personnel).
- Prepared and executed more than 500 hot-fire tests in 2021 alone, working with 98%+ hydrogen peroxide and other hazardous media.
- Developed and maintained laboratory infrastructure — high-pressure feeding installations, hot-gas deflector — and took part in commissioning a new low-pressure test facility.
- Maintained and developed test documentation; trained new personnel in propulsion testing, safety and engineering design.

Test Engineer, Center of Space Technologies

Mar 2017 — Jan 2021

ŁUKASIEWICZ RESEARCH NETWORK — INSTITUTE OF AVIATION

- Lead developer of the award-winning measurement and control software used in more than 1000 rocket engine tests (LabVIEW, PXI/cRIO real-time systems).
- Test engineer on multiple European Space Agency propulsion projects; project leader of an international commercial test campaign.
- Designed instrumentation, test infrastructure and quality documentation (CAD, P&ID, GD&T); designed the camera module for the ILR-33 Amber sounding rocket (flight-proven).
- Introduced additive manufacturing to the department and ran polymer (FDM) and metal (SLS) part programmes up to 500 mm scale.

Expert, "Lekcje Nie z Tej Ziemi" — Copernicus Science Centre, since Jun 2024: expert on rocket propulsion and in-orbit propulsion topics.

R&D Project Manager — Cloud Best sp. z o.o., Nov 2020 — Jan 2021: managed a 6-person design team on an urban electric vehicle programme.

Research Assistant — Warsaw University of Technology, Feb 2016 — Mar 2017: measurement systems and wind tunnel testing of adaptive aerodynamics on a nationally funded project.

Intern, production continuity and design office — Airbus Military, Jul — Aug 2014.

CORE COMPETENCIES

- Operation and maintenance of 24/7 technical facilities
- Operating documentation: procedures, work instructions, standards
- Review of design, technical and regulatory documentation
- Commissioning and operational readiness of new installations
- Industrial safety, risk analysis, FMEA, safety culture
- Systems engineering, requirements management, WBS
- Building teams and operating organisations from scratch
- Competency frameworks, recruitment, training programmes
- Cross-functional leadership and multi-stakeholder cooperation

EDUCATION

Leadership School — Freedom Institute, in progress

Postgraduate studies, Entrepreneurship in the Space Sector — Kozminski University, 2024–2025

MSc, Aerospace Engineering (aeronautical structures) — Warsaw University of Technology, Faculty of Power and Aeronautical Engineering

BSc, Aerospace Engineering — Warsaw University of Technology, 2012–2016

AWARDS & RECOGNITION

NI Engineering Impact Award — Europe, 2017. Best in Europe, for the rocket engine test stand control and measurement application.

Session chairman, EUCASS 2019. Hosted the "Regression rate and combustion instabilities" session.

SELECTED PUBLICATIONS

- 2022 Mobile Laboratory for Rocket Propulsion Tests (MOLAR) — 2nd International Conference on Flight Vehicles, Aerothermodynamics and Re-entry Missions & Engineering (FAR)
- 2022 The Green Dozen — twelve promising developments for European spacecraft and space transportation propulsion technology — 8th International Conference on Space Propulsion
- 2021 Lessons learned during development and usage of a propulsion test laboratory — 12th Development Trends in Space Propulsion Systems conference, Warsaw
- 2021 Development of green storable hybrid rocket propulsion technology using 98% hydrogen peroxide as oxidizer — International Journal of Aeronautics and Astronautics (MDPI)
- 2019 Scalability analysis of additively manufactured grain for a 4 kN high-test-peroxide hybrid rocket motor — 8th European Conference for Aeronautics and Space Sciences (EUCASS), Madrid
- 2018 Flow control for a car-mounted rear wing — International Journal of Mechanical Sciences

STANDARDS & TOOLS

Standards: ECSS, ISO 9001, ISO 17025, ATEX (handling of explosive materials), Lean / 5S

Engineering: Siemens NX (advanced CAD, PDM), P&ID, GD&T, LabVIEW (Vision, RT — PXI, cRIO), NI DIAdem, Python (basic)

Operations: Jira, Redmine, Jenkins, Visio, MS Office, SVN, Linux, Google Cloud tools

LANGUAGES

Polish — native · English — professional (B2/C1), daily work with technical documentation and in international teams

TRAINING & COURSES

- ECSS standards training
- ATEX — handling of explosive materials
- Lean Management
- Effective Project Management
- Leaders Academy
- Gallup CliftonStrengths with team management
- LabVIEW Embedded Control and Monitoring
- NX PDM Management

Space matter expert, 2024. Invited speaker and session lead at Forum G2 and the Karpacz Economic Forum.

P&G Business Minds Challenge, 2014. Finalist, Central Europe.