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Challenge 2: How to accelerate an impactful aeronautic innovation ecosystem?

Mosaic Creativity & Innovation Hub HEC MONTRÉAL

ADM Aéroports de Montréal

Universitat de Barcelona

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YMX: STRONG FOUNDATIONS, A NEW INNOVATION CHALLENGE

STRONG FOUNDATIONS

- 40+ companies
- Airport & test assets
- Espace Aéro
- Aerospace expertise

THE NEXT CHALLENGE

- Physical proximity ≠ innovation
- Need to activate the ecosystem

From industrial concentration to collaborative innovation

REFRAMING THE CHALLENGE: FROM ATTRACTION TO ACTIVATION

ATTRACT & CO-LOCATE ACTIVATE & ORCHESTRATE

Our reframed question

How can YMX Innovation activate, connect and coordinate its existing and emerging stakeholders to create a functional aerospace innovation ecosystem?

STAKEHOLDER	VALUE	IMPACT
What do actors need to collaborate?	How can they create more value together?	What meaningful outcomes should collaboration generate?

WHAT DRIVES STAKEHOLDER MOBILIZATION? (1. MOTIVATION-VROOM'S VIE MODEL)

Organizational Valence

Are the expected benefits strategically valuable?

Organizational Instrumentality

Does the organization believe that YMX/ADM's governance and ecosystem mechanisms will actually enable those benefits?

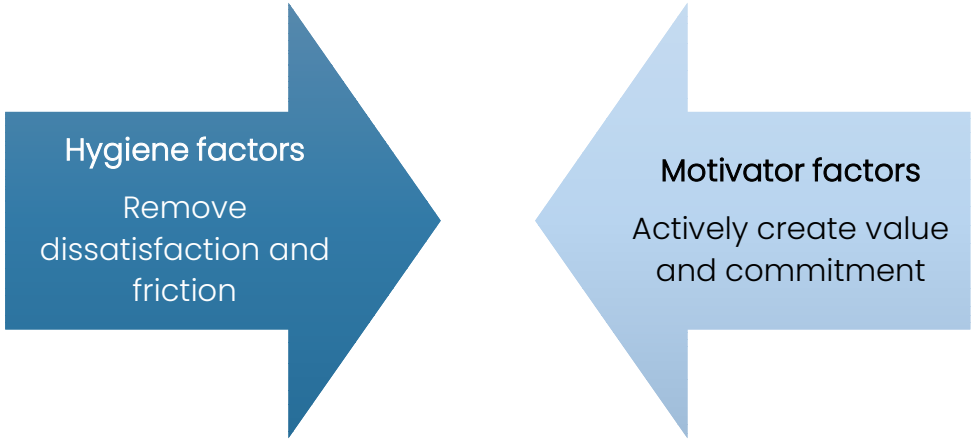
Organizational Expectancy

Does the organization have the internal capacity to take advantage of the opportunity?

Motivational Force = Valence × Instrumentality × Expectancy

From passive presence active participation

WHAT DRIVES STAKEHOLDER MOBILIZATION?
(2. SATISFACTION-HERZBERG'S TWO-FACTOR LOGIC)



3. INTERDEPENDENCE-RESOURCE-BASED VIEW & SOCIAL CAPITAL

Access complementary resources

Build trusted relationships

From passive presence ⋙ active participation

FROM PARTICIPATION TO SUSTAINED ENGAGEMENT

Remove the barriers to participation

- Accessibility & mobility
- Infrastructure capacity
- Administrative & regulatory complexity
- Airspace coordination
- Governance clarity

Create reasons to stay and collaborate

- Accelerate technology development
- Access funding and investment
- Create strategic partnerships
- Access specialized knowledge and talent
- Generate commercial opportunities
- Access unique experimentation environments

Align interests & resources

Individual value + collective value

Sustained engagement

PROPOSED ECOSYSTEM BUSINESS MODEL CANVAS FOR YMX INNOVATION

Building block	Concise on-slide content
1. Shared Ecosystem Value Proposition	Collaborative aerospace innovation generating economic, technological, environmental and societal value
2. Ecosystem Stakeholders	Organizations and communities that contribute to and benefit from the ecosystem
3. Collaboration Platforms	Living Labs, testbeds, innovation forums and joint projects
4. Stakeholder Engagement and Relationships	Continuous dialogue, co-design, mentorship and trust
5. Ecosystem Orchestration Activities	ADM connects partners, facilitates projects and coordinates governance
6. Shared Resources and Commons	Infrastructure, knowledge, data and talent accessed through agreed rules
7. Key Ecosystem Partners	Strategic organizations contributing essential capabilities, funding and institutional support
8. Ecosystem Sustainability Mechanisms	Potential public funding, research grants, partner contributions and service revenues
9. Priority Investments	Coordination team, collaborative programs, shared facilities, talent and evaluation

COLLABORATIVE ECOSYSTEM OPERATING MODEL (CEOM)

What strong aerospace ecosystems share

Examples discussed in the report: Montréal • Toulouse • Seattle • Toronto

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Strong anchors

Large firms and anchor organizations create stability, investment, and specialized labour pools.

Specialized capabilities

Talent, suppliers, research, and infrastructure create depth that cannot be built overnight.

Collaborative networks

Innovation depends on coordinated relationships across firms, research, government, and intermediaries.

Global pipelines

Critical aerospace knowledge and opportunities move across regions and international networks.

LOCAL DEPTH — **GLOBAL CONNECTIVITY**

Benchmarking lesson

Different models, but the same core requirement: combine strong local capabilities with strong external connections.

What benchmarking means for YMX

1 Build on existing strengths

Use Mirabel's existing aerospace assets, talent, infrastructure, and experimentation capabilities as the starting point.

2 Orchestrate — don't just colocate

Proximity alone is not enough. YMX must connect actors, align roles, and actively support collaboration.

3 Connect globally, retain value locally

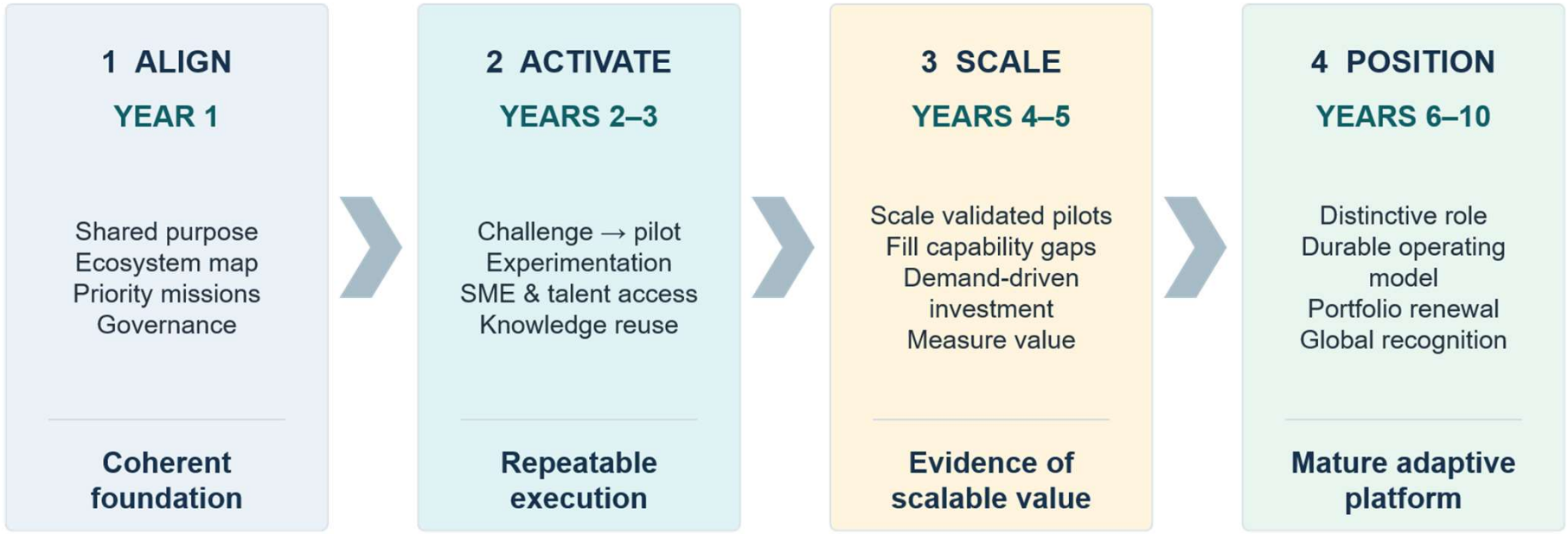
Bring in external knowledge and partners while strengthening capabilities and value creation in Mirabel and Québec.

4 Differentiate — don't duplicate

Complement Espace Aéro, Aéro Montréal, CRIAQ, and other actors instead of recreating functions they already perform.

Strategic implication: make real-world aerospace experimentation YMX's distinctive role.

A 5–10 year roadmap: from alignment to maturity



Each phase builds the capabilities and evidence needed for the next.

Align first — then move from mission to pilot

YEAR 1 | BUILD THE FOUNDATION

- **Shared purpose & value proposition**
  Clarify why YMX exists and what value it offers.
- **Actionable ecosystem map**
  Identify capabilities, gaps, interdependencies, and roles.
- **Focused mission portfolio**
  Select a small number of concrete, high-potential missions.
- **Anchor coalition & governance**
  Secure committed partners and clear collaboration rules.

YEARS 2–3 | ACTIVATE THROUGH MISSION-TO-PILOT

Bring startups, SMEs, researchers, students, and relevant operational actors directly into active missions.

Every project should leave a reusable knowledge trace.

Move from ecosystem design to repeatable collaborative execution.

Scale selectively — then build long-term maturity

YEARS 4–5 | SCALE WHAT WORKS

- Technical / operational evidence
- Credible adopter or customer
- Committed partners
- Manageable regulatory conditions
- Realistic financing / deployment path

YEARS 6–10 | POSITION FOR MATURITY

Distinctive role	A clearly differentiated function within the wider aerospace ecosystem.
Durable operating model	A transparent, viable partnership and value logic over time.
Portfolio renewal	Regularly adapt missions as technology, markets, and regulation change.
Evidence-based reputation	Build recognition from demonstrated capabilities—not visibility alone.

Core principle: growth should be capability-driven, not volume-driven.

Focus on three evolving opportunity domains

Sustainable aerospace & energy

Potential applications
- Sustainable aviation fuel
- Hydrogen
- Electrification
- Sustainable airport operations

Decision lens
Maturity, safety, infrastructure feasibility, environmental value

Advanced air mobility & autonomy

Potential applications
- Drones
- Advanced air mobility
- Autonomous flight
- Airspace management

Decision lens
Regulation, safety, integration, credible use cases

Digital aviation & intelligent operations

Potential applications
- AI and automation
- Simulation
- Data-enabled operations
- Smart logistics / manufacturing

Decision lens
Data, cybersecurity, interoperability, measurable performance

Treat these as opportunity fields — not fixed technology commitments.

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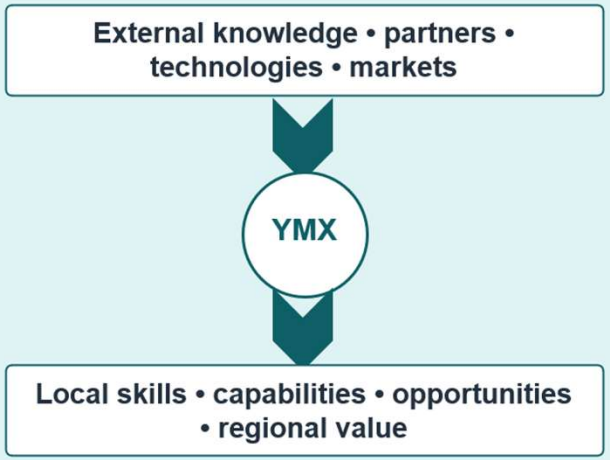
Build cumulative learning — and keep value connected locally

1 MAKE EACH PROJECT STRENGTHEN THE NEXT

Preserve project knowledge, know-how, relationships, methods, and unresolved challenges so learning accumulates across projects.

2 CONNECT GLOBALLY — RETAIN VALUE LOCALLY



Measure progress by cumulative capability — not activity volume.

Final strategic recommendation

YMX should become a

REAL-WORLD AEROSPACE EXPERIMENTATION & COLLABORATION PLATFORM

Mobilize actors

Bring complementary partners together around shared challenges.

Test in the real world

Turn collaboration into experiments, pilots, and demonstrations.

Retain learning

Make knowledge and experience reusable across projects.

Create wider value

Translate successful experimentation into technological, economic, and regional value.

Not more activity — a repeatable capacity to turn capability into impact.

EMBRACE CHANGE. LEAD THE FUTURE.

The world is shifting and those who adapt and innovate will be the ones to lead the way.

MERCI, THANK YOU