Impuls Agritech

## Impuls AgriTech Call 2025

# Operations Plan & Roadmap Strategy

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# Introduction

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## Santiago Serrate Cuadra

IT/IS Senior Operations @Nestlé-Nespresso

- Operations and IT/Software solutions professional with more than 20 years of experience. Currently managing the IT/IS operations, support and technology development for Nespresso IT/IS worldwide
- Teaching Operations, Strategy, Product Development and Project Management for EMBA and other Masters
- Tutor for final Projects and Thesis

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# Experience and Background

- Managed at global level the operations, projects and consultancy services for companies like Ricoh, CAME Parkare and Cinesa.

- Used to work with global teams to provide the best services for customers like Unilever, Siemens, Repsol, AENA and many others

- Technical Engineer in Electronics (UPC), Master in Information Technology Management (La Salle) and EMBA (La Salle)

- Additional certifications in ITIL V3, V4, Prince 2, SCRUM and Lean Six Sigma



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# What about you?

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- **Who are you?**
- **What is your current job? Are you planning to change it?**
- **What is your background?**
- **What is your project? What do you want to achieve?**

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# Roadmap Strategy

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A **strategic roadmap** is a high-level visual plan that outlines **how an organization will achieve its long-term goals over time**. It's not just a schedule—it connects **strategy to execution** by showing the major initiatives, their timing, and how they align with strategic objectives.

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# Roadmap Strategy

**Key Characteristics:**

- **Purpose**: Communicate the big picture—where the organization is headed and what steps will get it there.
- **Time Horizon**: Usually covers **1–3 years** (sometimes longer for big transformations).
- **Structure**:
  - **Themes or Pillars**: Broad strategic areas (e.g., *Digital Transformation*, *Sustainability*).
  - **Initiatives**: Major projects or programs under each theme.
  - **Timeline**: When initiatives start, end, and key milestones occur.

**Audience**: Executives, stakeholders, and delivery teams for alignment and prioritization.


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# Roadmap Strategy

**Why it matters:**

- Provides **clarity** on priorities.
- Helps **sequence work** and manage dependencies.

Serves as a **communication tool** for leadership and teams.



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# Roadmap Strategy - Example

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**Digital Agritech Strategic Roadmap (2026–2028)**

The **long-term goal** is to **digitally transform agriculture to make farming more efficient, sustainable, and profitable**.

**Strategic Vision**

- **Data-driven farming**: Use IoT sensors, connectivity, and data platforms to monitor soil, water, and crop health in real time.
- **Precision agriculture**: Optimize irrigation, fertilizer, and pest control to reduce waste and increase yield.
- **Automation & AI**: Deploy drones and computer vision for scouting and pest detection, reducing manual labor.
- **Market integration**: Provide farmers with apps, marketplaces, and carbon credit systems to improve income and sustainability.
- **Compliance & sustainability**: Ensure traceability, water-use monitoring, and adherence to global standards.
- **Platform enablement**: Build APIs, governance frameworks, and change management to scale operations globally.



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# Roadmap Strategy - Example

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**Strategic Pillars (Themes)**

1. **Data & IoT Infrastructure**
   *Enable real-time insights through connected sensors and data platforms.*
2. **Farm Operations**
   *Optimize crop management using precision agriculture and automation.*
3. **Market Access & Services**
   *Empower farmers with digital tools and new revenue streams.*
4. **Sustainability & Compliance**
   *Ensure traceability, resource efficiency, and adherence to global standards.*
5. **Platform & Organizational Enablement**
   *Build scalable technology and processes to support transformation.*



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# Roadmap Strategy - Example

**Initiatives (Examples under each pillar)**

- **Data & IoT Infrastructure:**
  - Deploy sensors
  - Build LoRaWAN network
  - Create data lake
- **Farm Operations:**
  - Irrigation optimization
  - Pest detection via AI
  - Autonomous drones
- **Market Access & Services:**
  - Farmer app
  - Input marketplace
  - Carbon credit issuance
- **Sustainability & Compliance:**
  - Traceability systems
  - Water/nutrient dashboards
- **Platform & Org Enablement:**
  - APIs
  - Data governance
  - Change management

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# Roadmap Strategy – Best Practices

**Timeframe & granularity**

- Keep a 24–36 months window (e.g., 2026–2028)
- Use **quarters** for exec views; switch to **months** if you need delivery planning

**Milestones**

- Mark **decision gates** (PoC, MVP, GA), **regulatory checkpoints**, or **commercial launches**
- Tie milestones to measurable benefits or stage-gate exit criteria

**Owners & governance**

- Keep owners on the right for accountability
- Add a footer with your cadence (*monthly steerco, quarterly release train*)

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# Roadmap Strategy - Example

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Based on the Best Practices the Milestones for the previous example could look like:

## Data & IoT Infrastructure

- Deploy low-power field sensors (soil, moisture, weather) — **Pilot Q1’26; Scale Q3’26**
- Edge + LoRaWAN network build-out — **Backhaul Q2’26; 80% coverage Q4’26**
- Unified data lake & stream ingestion — **MVP Q3’26; Prod Q1’27**

## Farm Operations

- Variable-rate irrigation optimization v1 — **MVP Q4’26; ROI study Q2’27**
- CV for pest & disease detection — **Models Q1’27; Field trial Q3’27**
- Autonomous scouting drones (POC) — **POC Q2’27; Ops trial Q4’27**



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# Roadmap Strategy - Example

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## Market Access & Services

- Farmer mobile app (advice, alerts, logs) — **Beta Q3’26; GA Q4’26**
- Input marketplace integration — **Partners Q1’27; Launch Q3’27**
- Carbon credit measurement & issuance — **Method Q4’27; Issuance Q2’28**

## Platform & Organization Enablement

- APIs & partner portal — **Portal beta Q3’26; APIs v1 Q1’27**
- Data governance & privacy (GDPR/consent) — **Policies Q2’26; Controls Q4’26**
- Change mgmt & agronomist enablement — **Playbooks Q1’27; Scale Q2’27**

## Sustainability & Compliance

- Field-level traceability & audits (GS1/ISO) — **Trace v1 Q4’26; Audits Q1’27**
- Water-use & nutrient dashboards — **Dash v1 Q2’27; Benchmarks Q4’27**



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# Roadmap Strategy - Example

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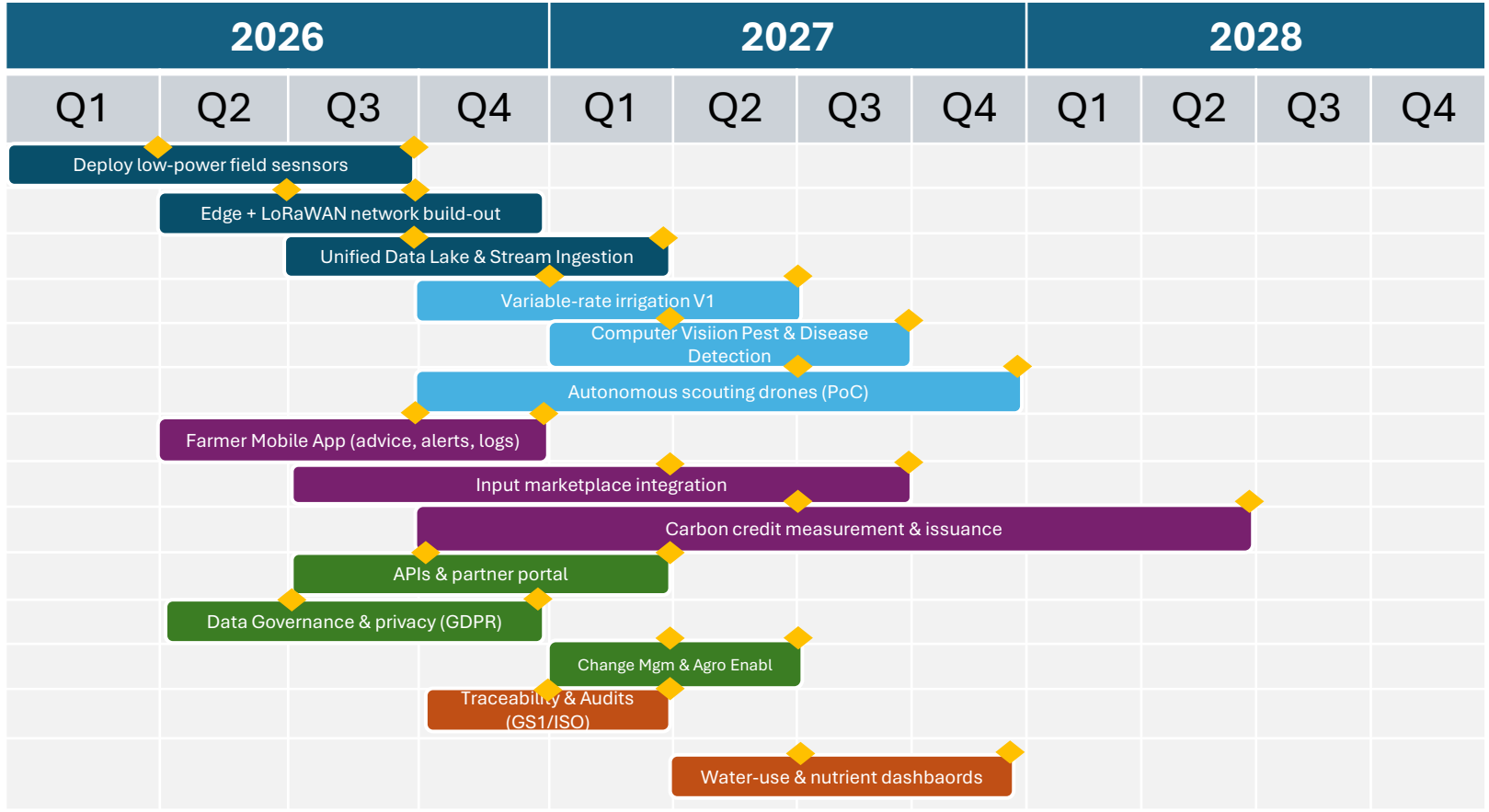
- Data & IoT Infrastructure
- Farm Operations
- Market Access & Services
- Platform & Org. Enablement
- Sustainability & Compliance

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# Operations Plan

An **Operations Plan** is a detailed document or section that explains how a company will run day-to-day activities to achieve its strategic goals. It focuses on the execution side of strategy—the processes, resources, and responsibilities needed to deliver products or services efficiently.

Contributors | XX/XX/XXXX

| OBJECTIVES | MILESTONES | | SEPTEMBER 01-07 | SEPTEMBER 08-14 | SEPTEMBER 15-21 | SEPTEMBER 22-28 | OCTOBER 29-05 | OCTOBER 06-12 | OCTOBER 13-19 | OCTOBER 20-26 | OCTOBER 27-02 | OCTOBER 03-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBJECTIVES | MAIN OBJECTIVE: PILOT PROJECT IN FULL PRODUCTION MODE BY MARCH 2025 | | | | | | | | | | | |
| | G 1.1: Scientific Pilot & R&D Questions identified | | | | | | | | | | | |
| | G 1.2: Scalatable Azolla Production Tecnhiques, Technology and Costs Identified | | | | | | | | | | | |
| AGRICULTURE - PILOT PROJECT IN FULL PRODUCTION MODE | Flowerbed Developed | Tasks | First Drafts | | | | Quotes | | | | | |
| | | Capabilities | *Operations team* | | | | *Operations Team* | | | | *Funds* | |
| | Nursery Developed (Azolla Inoculum) | Tasks | Investigation & Contact Dr. Carrapiço | | | | Together with Dr. Carrapiço and | | | | | |
| | | Capabilities | *Ops team & Sci Team* | | | | *Ops team & Sci team, F* | | | | | |
| | Water and Fertirrigation System | Tasks | Contact Irricampo, Aquamatrix,AquaLogus | | | | Quotes & Design Options | | | | | |
| | | Capabilities | *Operations Team* | | | | *Ops team & Subcontracted* | | | | | |
| | Field Machinery | Tasks | First Drafts | | Contact Fialho | | Linear Pivot Quotes | | | | Buy P | |
| | | Capabilities | *Ops team* | | *Ops Team* | | *Ops team* | | | | *Funds* | |
| | Crop Protection Plan & Crop Production Plan | Tasks | | | | | Develop PRODI Plan & Field Sheets | | | | | |
| | | Capabilities | | | | | *Ops team, PRODI guidelines* | | | | | |
| INDUSTRIAL - PILOT PROJECT IN FULL PRODUCTION MODE | Tecnhology Partnership | Tasks | Identify and Contact Potential Partners | | | | | Get Quotes | | | | |
| | | Capabilities | *Sourcing, Operations and R&D teams* | | | | | *Sourcing Team* | | | | |
| | Rent a Processing Facility or Refurbish existing one | Tasks | Identify and Contact Potencial Suppliers and Contractors | | | | | Get Quotes | | | | |
| | | Capabilities | *Sourcing Team* | | | | | *Sourcing Team* | | | | |
| | Buy or rent Equipment | Tasks | | | | | | | | | | |
| | | Capabilities | | | | | | | | | | |
| | Industrial Machinery Preparation /Assembly | Tasks | | | | | | | | | | |
| | | Capabilities | | | | | | | | | | |
| | Commissioning and Testing Processes | Tasks | | | | | | | | | | |
| | | Capabilities | | | | | | | | | | |

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# Operations Plan – Key Elements

- **Objectives & Scope:** What the plan aims to accomplish (e.g., meet production targets, ensure service quality)

- **Processes & Workflows:** Step-by-step description of how core activities will be carried out (manufacturing, logistics, customer service)

- **Resources:**
  People: Roles, Responsibilities, Staffing plans
  Assets: Equipment, Facilities, Technology
  **Budget: Operational costs and allocations**

- **Timeline:** Daily, weekly, monthly, or quarterly schedules for tasks and deliverables

- **KPIs & Metrics:** How success will be measured (e.g., production output, defect rate, delivery time)

- **Risk Management:** Contingency plans for supply chain disruptions, equipment failures, etc.


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# Operations Plan & Roadmap Strategy

- **Roadmap answers:** *"What are the big initiatives and when do they happen?"*

- **Operations Plan answers**: *"How will we deliver those initiatives day-to-day?"*



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# Operations Plan & Roadmap Strategy

| Linking Mechanism | |
|---|---|
| **Roadmap Element** | **Operations Plan Detail** |
| Vision & Pillars | Operational Objectives aligned to each Pillar |
| Initiatives (Bars in Gantt) | Detailed workflows, resources allocation, SOPs |
| Milestones | Task breakdown, deadlines, quality checks |
| Owners | Team roles, RACI matrix, Staffing Plan |
| KPIs | Daily/Weekly metrics, Dashboards |


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# Operations Plan & Roadmap Strategy

Based on the previous example the link could look like:

| **Pillar:** Data & IoT Infrastructure<br>**Objective 1:** Data & IoT Infra ready by Q2 2027 |
|---|
| *Roadmap Initiative – Deploy IoT sensors (Q1-Q3 2026)* |
| Procurement Schedule for sensors |
| Field installation process |
| Training for technicians |
| Weekly progress tracking |
| Risk mitigation (e.g., supply delays) |
| TOTAL COST |



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# Operations Plan & Roadmap Strategy

For all the Initiatives you will need to define the Operations Plan. The combination of all Operation Plans will ensure the execution of the Pillar defined in your Strategy

| **Pillar:** Data & IoT Infrastructure<br>**Objective 1:** Data & IoT Infra ready by Q2 2027 |
| --- |
| *Roadmap Initiative – Deploy IoT sensors (Q1-Q3 2026)* |
| *Roadmap Initiative – Edge + Network(Q2-Q3 2026)* |
| *Roadmap Initiative – Data Lake (Q3 2026-Q1 2027)* |



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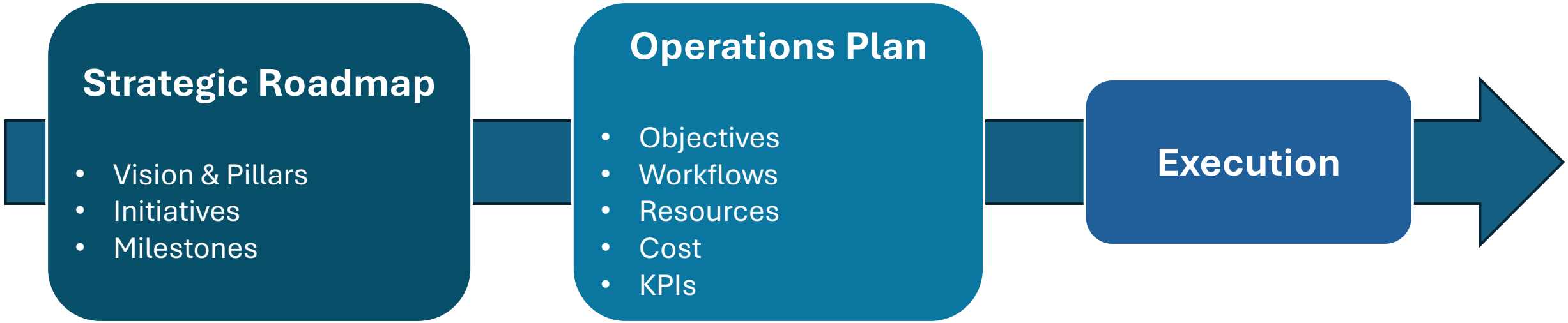
# Operations Plan & Roadmap Strategy

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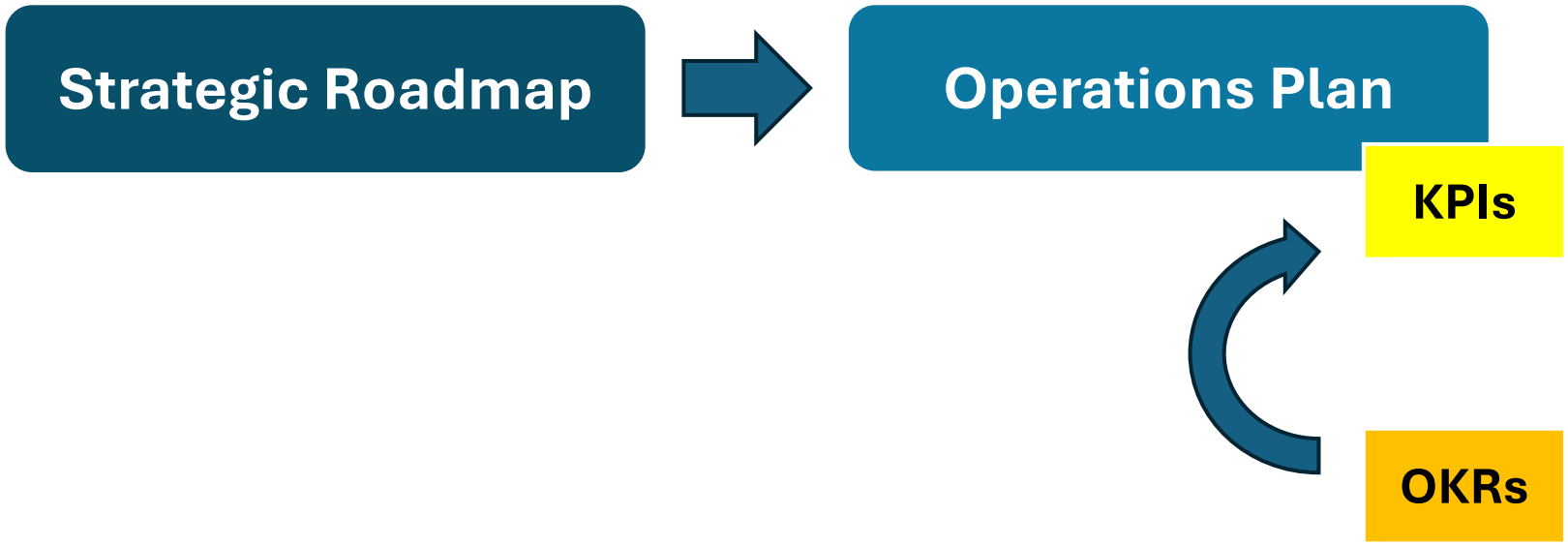
# Operations Plan & Roadmap Strategy

It is important to measure and track. For this you must use KPIs and OKRs




Measure Performance and Progress against Operational and Strategic Goals

Align teams with clear objectives and measurable results

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# Operations Plan & Roadmap Strategy

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Based on the example shared above. We can think about some KPIs and OKRs

**Strategic Roadmap** → **Operations Plan**

**Pillar:**
Data & IoT Infrastructure
**Objective 1:**
Data & IoT Infra ready by Q2 2027

**Roadmap Initiative** – Deploy IoT sensors (Q1-Q3 2026)

**KPIs**

- Sensor deployment coverage: **80% by Q3 2026**
- Water usage reduction: **- 20% per hectare**
- Farmer adoption: **70% by end of year**

**OKRs**

**Objective:** Improve farm efficiency through IoT

- Deploy 10.000 sensors by Q3 2026
- Achieve 15% yield improvement by Q4 2027
- Reduce irrigation costs by 20%


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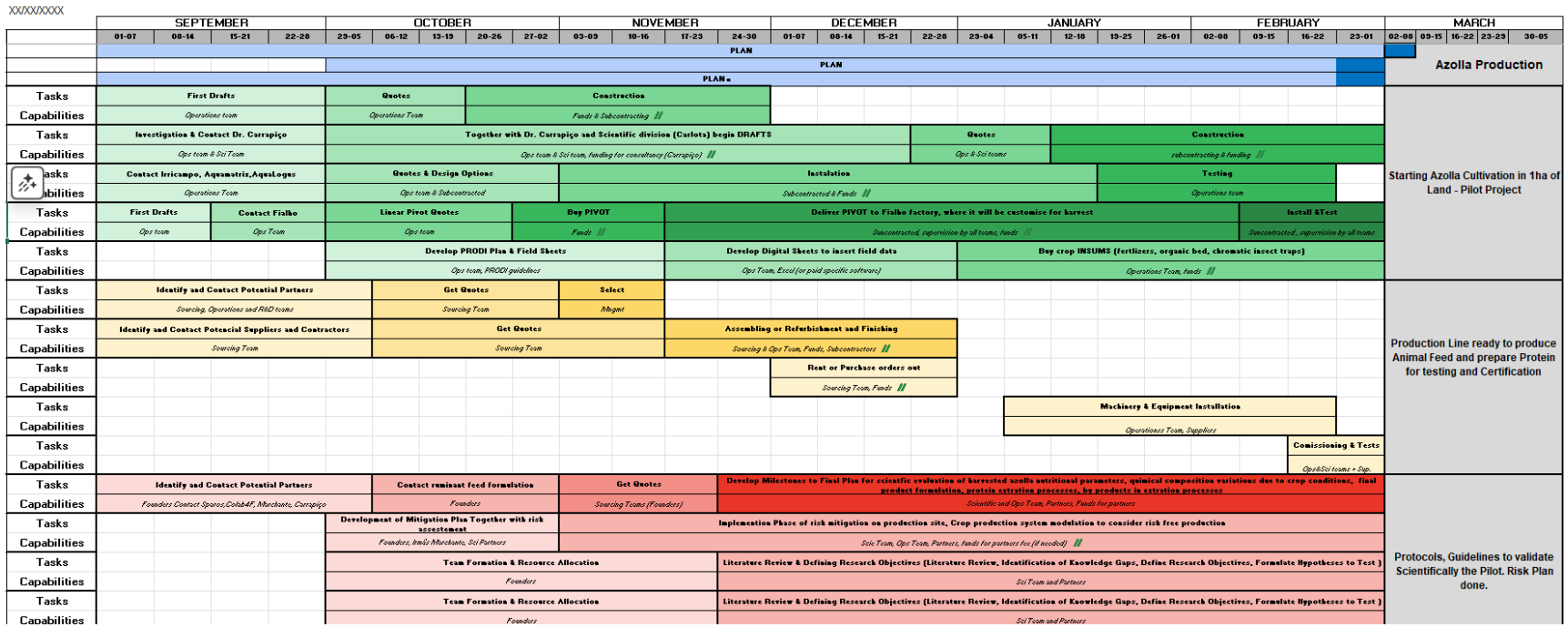
# What now?

- **Create the Operations Plan for your project (7 months) focusing on the Objectives and Milestones for:**
  - Product Development
  - Market Development
  - Organization and Resources

- **You can use the Roadmap Template**

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# Thank you!

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