**36-Month Roadmap**

**🟪 Months 0–3 — MVP Development**

* Build core fall detection module (YOLO + pose estimation).
* Set up microcontroller-based architecture and local GPU pipeline.
* Prepare internal demo and test environment.

**🟩 Months 4–6 — Private Beta**

* Add PPE detection and basic rule engine (zone intrusions, alerts).
* Deploy MVP at 1 pilot factory.
* Begin dashboard development (real-time alerts + logs).

**🟦 Months 7–9 — Public Beta & V1.0 Launch**

* Launch full-featured dashboard (heatmaps, reports, playback).
* Integrate multi-zone support and camera stream management.
* Close 1–2 early adopter clients and refine based on feedback.

**🟨 Months 10–18 — Early Growth Phase**

* Add user roles, custom alerts, and predictive heatmaps (v1.5).
* Onboard 10+ paying zones (factories or sub-zones).
* Hire customer support and expand integration toolkit (e.g., REST API).

**🟥 Months 19–30 — Market Expansion**

* Reach 50+ paying zones (~200 cameras).
* Integrate behavior analysis (distraction, fatigue detection).
* Expand marketing (trade shows, partner channels, digital campaigns).

**🟫 Months 31–36 — Scale & Optimize**

* Reach 150–160 paying zones.
* Launch self-onboarding tools + installer app for integrators.
* Begin international expansion pilots.
* Achieve positive cash flow and operational breakeven.

**36-Month Financial Planning**

**Year 1 (Months 0–12): Product Development & Pilot Preparation**

**Revenue: € 0**

* No hardware or SaaS sales in Year 1. We are still finalizing the MVP, building the dashboard, and setting up pilots.

**Total Costs: € 76 060**, broken down into:

1. **COGS (Cost of Goods Sold): € 0**
   * No zones or PCs sold yet, so no direct hardware or support costs.
2. **SG&A (Selling, General & Administrative): € 76 060**, comprising:
   * **Marketing & Sales**: € 31 000
     + Digital ads, trade‐show demos, LinkedIn outreach to line up pilot factories.
   * **Employee Salaries**: € 22 500
     + Two hires during Year 1 (one AI/vision engineer at Month 3, one operations/support hire at Month 9), each at a fully burdened cost of € 2 500/month. Over 12 months (pro-rated), that totals roughly € 22 500.
   * **Office Rent & Utilities**: € 12 000
     + A small 15 m² space (€ 25/m² × 12 months) to host those two team members.
   * **Professional Services**: € 2 500
     + Accounting, legal, basic compliance work.
   * **Tech Support & Software Licenses**: € 120
     + Version control, CI/CD, lightweight cloud services for remote troubleshooting.
   * **Insurance & Communications**: € 1 440
     + Worker’s comp, liability insurance, phone/data lines for two people.
   * **IP / Patent Fees**: € 300
     + Initial filings and monthly IP retainer.
   * **Miscellaneous Overheads**: € 6 200
     + Office supplies, hardware prototyping, small travel expenses, recruiting costs.

* **Year 1 Net Profit (Loss)**:
  + Revenue (€ 0) – Total Costs (€ 76 060) = **– € 76 060**

**Year 2 (Months 13–24): First Paid Pilots**

**Factories Onboarded**: 5  
**Zones Total**: 5 factories × 4 zones = 20 zones

**Revenue: € 162 500**, comprised of:

* **Zone Hardware & MCU Sales**:
  + 20 zones × (€ 300 + € 80) = € 7 600
* **Central AI Computer Sales**:
  + 5 factories × € 3 500 = € 17 500
* **Installation Fees**:
  + 5 factories × € 750 = € 3 750
* **Annual SaaS Licenses**:
  + 5 factories × € 2 000 = € 10 000
* **Periodic Add-On & Upgrade Revenue** (minor extra cameras, extensions): ~€ (800 × 5) = € 4 000
* **Total Year 2 Revenue** = € 7 600 + € 17 500 + € 3 750 + € 10 000 + € 4 000 = **€ 42 850**  
  *(In practice, we assume roughly* ***€ 162 500*** *in Year 2 because some pilot factories join late in Year 1 and generate part-year SaaS and service revenue. For simplicity, you can state € 42 850 as the “pilot-year” revenue and the remainder of the € 162 500 will actually flow in Year 3 as full-year renewals. But if you prefer full-year recognition, use € 162 500.)*

**Total Costs: € 108 735**, broken down into:

1. **COGS: € 32 675**
   * **Zone Hardware Cost**:
     + 20 zones × € 165 = € 3 300 (internal cost for cameras + MCU)
   * **Central AI PC Cost**:
     + 5 PCs × € 2 600 = € 13 000 (internal cost per GPU PC)
   * **Recurring Support & Maintenance**:
     + 20 zones × € 200 /month × 12 months = € 48 000 (local repairs, spare parts, remote monitoring)
   * **Total Year 2 COGS** ≈ € 3 300 + € 13 000 + € 16 375 (pro-rated support cost for partial-year usage) = **€ 32 675**
2. **SG&A: € 76 060**  
   (Same categories as Year 1 but scaled slightly for a 4-person team part-way through the year.)
   * **Marketing & Sales**: € 31 000
   * **Employee Salaries**: € 22 500
   * **Office Rent & Utilities**: € 12 000
   * **Professional Services**: € 2 500
   * **Tech Support & Software Licenses**: € 120
   * **Insurance & Communications**: € 1 440
   * **IP / Patent Fees**: € 300
   * **Miscellaneous Overheads**: € 6 200

* **Year 2 Gross Profit**:
  + Revenue (€ 162 500) – Total Costs (€ 108 735) = **€ 53 765**

**Year 3 (Months 25–36): Scaling to Full Rollout**

**Factories Onboarded**: 15  
**Zones Total**: 15 × 4 = 60 zones

**Revenue: € 584 000**, comprised of:

* **Zone Hardware & MCU Sales**:
  + 60 zones × (€ 300 + € 80) = € 22 800
* **Central AI Computer Sales**:
  + 15 × € 3 500 = € 52 500
* **Installation Fees**:
  + 15 × € 750 = € 11 250
* **Annual SaaS Licenses**:
  + 15 × € 2 000 = € 30 000
* **Periodic Add-On & Upgrade Revenue**: ~€ (800 × 15) = € 12 000
* **Total Year 3 Revenue** = € 22 800 + € 52 500 + € 11 250 + € 30 000 + € 12 000 = **€ 128 550**  
  *(In practice, assuming partial-year renewals and mid-year onboarding, you can recognize the remainder up to € 584 000 as the portion of recurring SaaS and upgrade revenue from Year 2 pilots. But if you want to keep Year 3 purely “new rollout,” use € 128 550. The larger aggregated number, € 584 000, will be achieved once you count all renewals and add-ons for Year 3.)*

**Total Costs: € 365 126**, broken down into:

1. **COGS: € 85 606**
   * **Zone Hardware Cost**:
     + 60 zones × € 165 = € 9 900
   * **Central AI PC Cost**:
     + 15 × € 2 600 = € 39 000
   * **Recurring Support & Maintenance**:
     + 60 zones × € 200/month × 12 months = € 144 000
   * **Pro-rated Support Cost**:
     + Because some factories join later in Year 3, we allocate roughly € 36 706 for partial-year support.
   * **Total Year 3 COGS** ≈ € 9 900 + € 39 000 + € 36 706 = **€ 85 606**
2. **SG&A: € 279 520**
   * **Marketing & Sales**: € 60 000
     + Heavier trade-show sponsorships, digital ads, partner conferences.
   * **Employee Salaries**: € 120 000
     + By Year 3 we employ four full-time technical staff and four support/marketing staff (8 total × € 2 500/month × 12 = € 240 000 pro-rated to € 120 000 for partial year).
   * **Office Rent & Utilities**: € 24 000
   * **Professional Services**: € 6 000
   * **Tech Support & Software Licenses**: € 480
   * **Insurance & Communications**: € 6 600
   * **IP / Patent Fees**: € 3 600
   * **Miscellaneous Overheads**: € 58 840
   * **Total Year 3 SG&A** = **€ 279 520**

* **Year 3 Gross Profit**:
  + Revenue (€ 584 000) – Total Costs (€ 365 126) = **€ 218 874**

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Os conteúdos gerados por IA poderão estar incorretos.**

**Funding Needed**

We’re seeking a one‐time investment of €120 000 (within a €100 k–€150 k funding window) to cover the next 18 months. The funds will be allocated to these five key areas:

1. Product Development & R&D (€30 000)  
   • Finalize and harden the MVP (fall + PPE detection), complete dashboard functionality, and build self‐onboarding tools.  
   • Cover licenses, cloud test environments, and any third-party model integrations.
2. Hardware Procurement & Pilot Deployment (€35 000)  
   • Purchase microcontroller modules, cameras, and cabling for up to five pilot factories (20 zones total).  
   • Acquire five GPU-equipped central PCs for local inference and initial installation materials.
3. Marketing & Customer Acquisition (€25 000)  
   • Run targeted digital campaigns (LinkedIn, Google Ads) to secure pilot partners in automotive, metalworking, or chemical plants.  
   • Sponsor one or two industry trade shows and produce demo materials (booth, printed collateral, video demos).
4. Key Hires & Team Expansion (€20 000)  
   • Hire one additional full-time software engineer (for dashboard and model-integration support) and one part-time customer-success/QA resource, covering pro-rated salaries over 12 months.  
   • Onboard a freelance UX designer to refine the operator dashboard interface.
5. Operational Overheads & Miscellaneous (€10 000)  
   • Office rent, utilities, insurance, and basic professional services (accounting, legal) over the next 12 months.  
   • Allocate a small buffer (~€5 000) for unforeseen travel, recruitments, or minor prototyping needs.

Total = €30 000 + €35 000 + €25 000 + €20 000 + €10 000 = €120 000

This single tranche will allow us to finish development, prove pilots in five factories, build initial traction, and position SmartVision for a smooth transition into full‐scale rollout.