

Mission Model Canvas

Project title:

Keyline Planner

Created by:

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Date:

30.06.2025

Partners & Support 🤝

- Farmers and Planners
- QGIS development community
- Keyline design and agroforestry planning community

Activities 🛠️

1. Develop web application to assess Keyline Design potential and connect with planners
2. Build QGIS plugin for automated Keyline Design planning based on custom least cost algorithm
3. Field validation and user-centered testing with planners and farmers

Ressources 🛠️

1. Keyline design know-how and farmer network
2. GIS and hydrological modeling expertise
3. Software development for web and QGIS environments

Project 📦

A digital planning tool that enables farmers and planners to implement water-optimized Keyline patterns across landscapes – resulting in both functional and aesthetically pleasing landforms. It helps retain soil moisture, reduce erosion and build resilience to drought and heavy rainfall events. Through a web app and QGIS plugin, it enables scaled, efficient, and sustainable planning by automatically generating Keyline patterns based on topography and other boundary conditions and estimate water retention potential.

Relationship, Community ❤️

- Actively involve users in feedback loops during development
- Showcase pilot success stories and use farmer ambassadors

Channels 📺

- Direct outreach through farming and planning networks
- Social media and agricultural media
- QGIS Python Plugin Repository
- Presentation at conferences

Target Groups 👤

- Farmers and landowners in Switzerland and beyond
- Agricultural and environmental planners
- National and Cantonal authorities

Budget 💰

Concept Development: CHF 2'500
 Web Application Development: CHF 25'000 - 35'000
 QGIS Plugin Development: CHF 20'000 - 25'000
 Design Testing, UX, Hosting Setup: CHF 5'000
 Project Management, Workshops, Communication: CHF 2'500
 Total: ~CHF 55'000 – 70'000

Impact 🌱

1. Climate Impact: Increased water retention in soils. Reduced flood peaks and erosion. Regenerating soils. Stabilize groundwater level and baseflow. Improved resilience to droughts and storms
2. Measurement: Number of planned Keyline-Design projects using the digital tool and user feedback.
3. Scaling: Open-source model allows national and international use. Network effect through shared success stories and planner community. Expand with agroforestry planning tools.