# Thalir Tech - Pitch Deck Summary

## Company Overview

About Us: Thalir Tech is a forward-thinking student-led AgriTech startup focused on dairy innovation.
We support farmers-especially small-scale-with AI-driven tools that improve livestock health, productivity, and sustainability.

Mission: To empower dairy farmers with affordable, easy-to-use health monitoring tools for early disease detection, improved animal welfare, and economic resilience.

Vision: Healthier herds. Smarter farms. Stronger communities.

## Problem Statement

Subclinical mastitis leads to over 70% of milk production losses in India. Its invisibility results in long-term milk quality deterioration and hidden financial losses. Traditional diagnostic methods are costly and inaccessible to small farmers. There is a pressing need for affordable, fast, and farmer-friendly early detection technology.

## Proposed Solution

Milk samples are tested from co-operative societies or milking machines. Key milk components-Fat, SNF, Sodium, Potassium, Chlorine, pH-are analyzed to detect subclinical mastitis using AI prediction models. The results are relayed to farmers for timely action.

## Technology Applied

We trained AI models on synthetic data (2000 samples/model) using:
- Random Forest (best with 93% accuracy)
- Logistic Regression, Naive Bayes, KNN, Decision Tree

The system monitors milk quality continuously, detecting subclinical mastitis 7-15 days before symptoms appear, enabling timely intervention.

## Market Analysis

Challenges:

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- Existing machines are costly and less accessible to small farmers

Opportunities:

- Affordable detection units integrated into milk analyzers and milking machines

Target: Small-scale farmers, dairy co-operatives, and commercial dairy farms.

## Milestones

* Prototype developed with 94% accuracy using Random Forest
* Initial field validation started
* Provisional patent filed
* MoUs in progress with VIF and TANUVAS for collaboration and validation

## Budget Breakdown

1. Hardware & Components
2. AI/ML & Federated Learning
3. IoT Integration & Software Development
4. Prototyping & Fabrication
5. Testing & Field Deployment