Executive Summary

- Automated sorting damaged fruit and vegetables
- Our goal: to provide technology for low-cost and accurate evaluation of fruit and vegetables
- Our technology: laser-based inspection
- Current technologies are either not efficient enough or too expensive
- Our idea: our know-how, your benefit = **win-win approach**

Laser Supported Food Inspection
Application of dynamic speckle pattern analysis in apple sorting lines

Automatic identification of DAMAGED and HEALTHY apples

Laser Supported Food Inspection
Problem Solved

- Demand: lower cost and precise tool to sort damaged fruit and vegetables
- Our technology is PATENT protected
- Prototype device developed for apples
- Solutions for other fruits and vegetables can be provided on demand
Available Solutions and Alternatives

- Manual sorting – labor intensive
- Acoustic technology – high risk of contamination
- Spectroscopy – expensive
- Chlorophyll fluorescence – effective but complex and costly to implement

Laser Supported Food Inspection
Proposal

You:
- will improve the quality of fruit control
- achieve this goal at low cost
- gain quality leader reputation on the market

We:
- provide device for apples
- provide support
- intend to launch new products for other species
Conclusions

We are the cheapest among the best and the best among the cheapest

Benefits: labor reduction, reduce transport cost, reduce waste, contributes to positive reputation, improve vendor selection.

Belief Points: well established scientific background, results of test in the institute, short trial period is possible.

Laser Supported Food Inspection
Return on Investment

Assumptions:
Price: $6 000, 5 per line, 2 lines in each center
Maintenance annual fee: 15%, system implementation: $ 500 000
10 logistics centers

50 supermarkets
2000 small and medium markets
Ca 10% waste (damaged items)
Damaged items eliminated in logistic center

Return on Investment
Average margin on 1 kg: 17 cent
Hypermarket weekly sell: 8 000 kg
S&M sell: 2 500 kg per week

Waste and operation cost related: 40 000 $ per week ca 2 MM yearly