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Operations at Barry Callebaut



Agenda

- ▶ Operations and Supply Chain Organization
 - ▶ Vision
 - ▶ Organization
- ▶ Flow and Footprint
- ▶ Continuous improvement
 - ▶ One+
 - ▶ Quality
 - ▶ Strategic equipment sourcing
 - ▶ Investments
- ▶ Process and technology development
- ▶ Sales and Operations Planning
- ▶ Raw material optimization
- ▶ CSR
- ▶ Advantages of BC



OSCO Vision



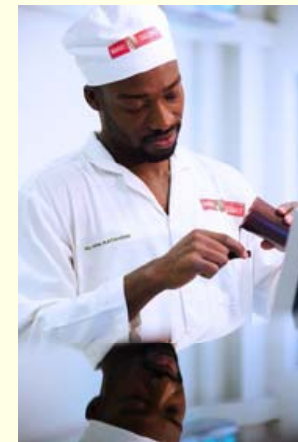
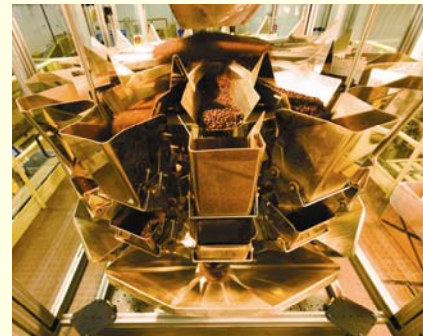
Respond to the business requirements in the most effective and efficient way





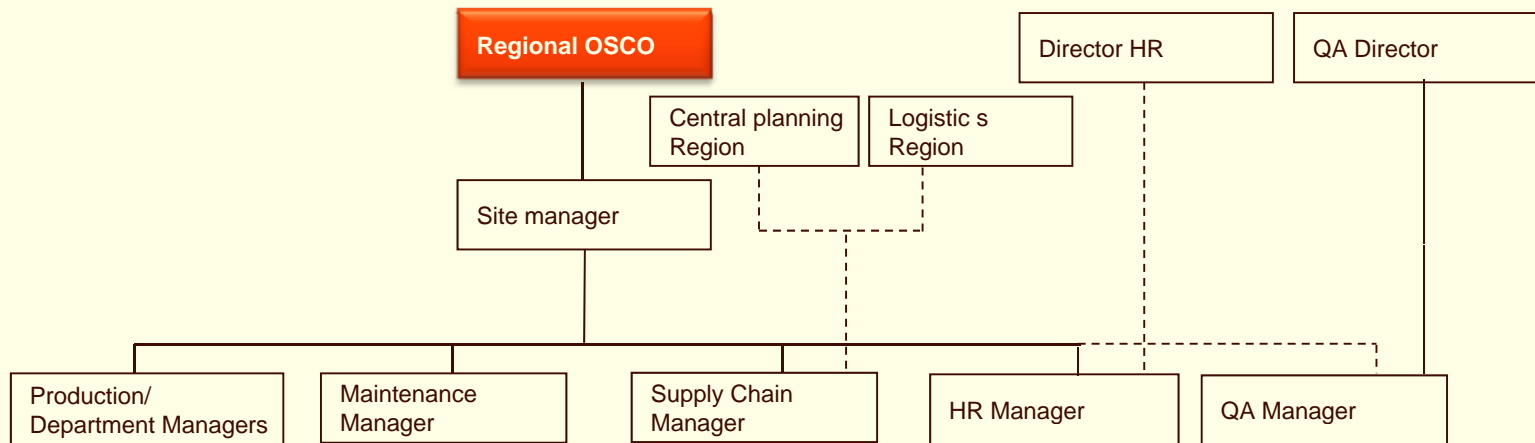
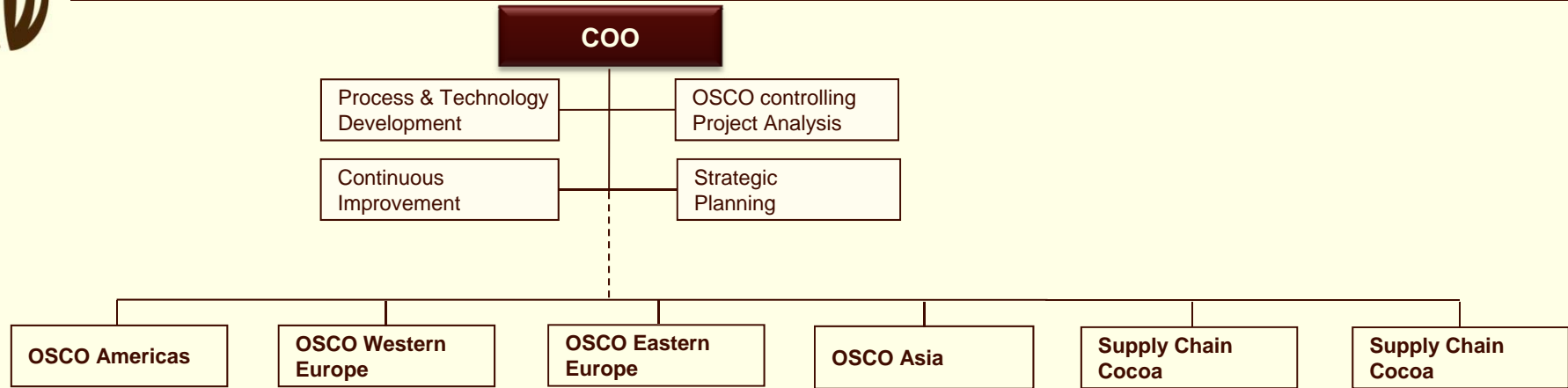
Strategic Pillars

- ▶ Flow and footprint optimization to achieve lowest cost of goods sold
- ▶ Continuous improvement
- ▶ Process and technology development
- ▶ Sales and Operations planning
- ▶ Raw material optimization





OSCO organization





Flow and Footprint



Truly global manufacturing footprint with 40 production facilities in 26 countries worldwide





Advantages of our factory footprint

▶ Focused factories allow us to produce a wide range of products with limited complexity

Cocoa:

- ▶ Origin factories focussed on access to the beans with limited product range
- ▶ Cocoa sites in consuming countries focussed on blending of different origins and service to the customers
- ▶ Integrated sites focussed on the cocoa requirements for the chocolate



Chocolate:

- ▶ Specialties (like white, nuts products etc.) are centralized in a limited number of sites per region
- ▶ Standard products are produced close to the customers and are used for capacity balancing





Advantages of our factory footprint

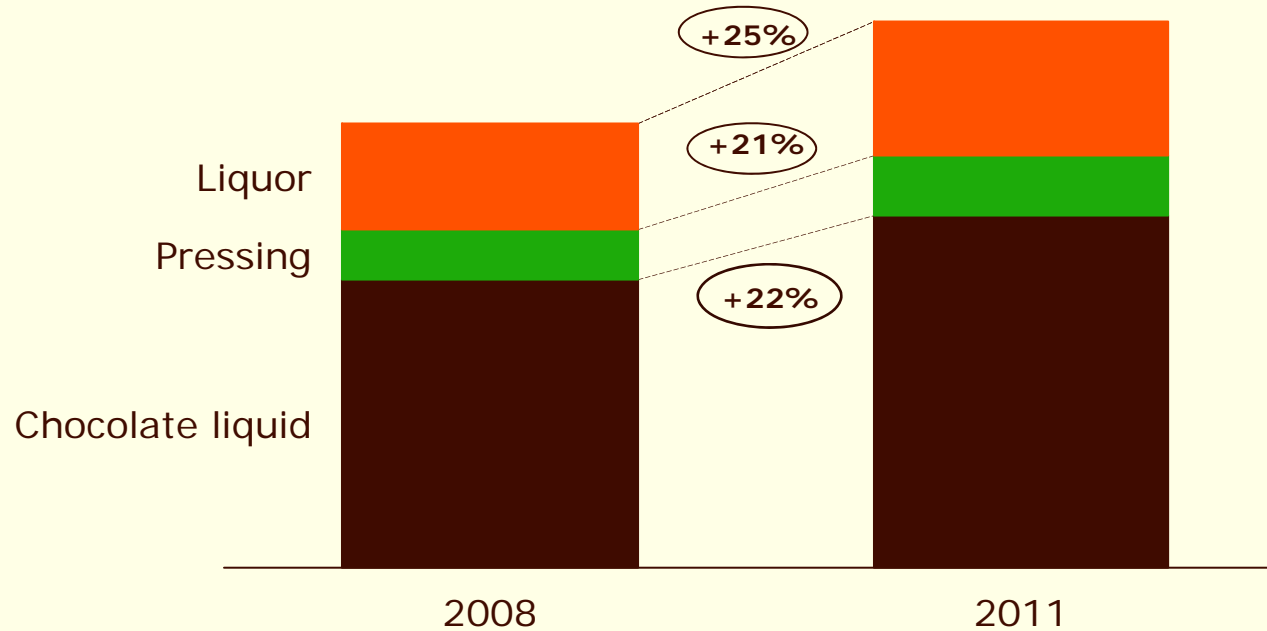
- ▶ By operating as a network we can make full use of the economies of scale
 - ▶ Not all processes are done in each site
 - ▶ Lines can be dedicated to specific product types
- ▶ In a network it is easier to create back-up in case of problems
 - ▶ Interchangeable products
- ▶ Flow and footprint optimizations
 - ▶ Footprint studies are done to determine the optimal location for capacity extensions
 - ▶ Flow optimizations are implemented between regional & strategic planning



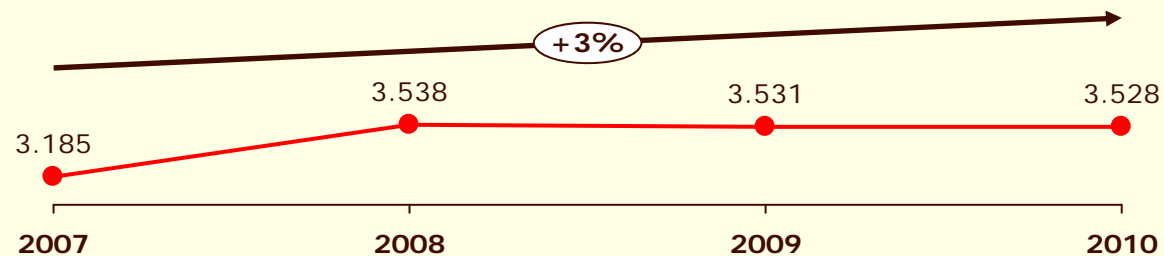


Supporting growth while staying cost leader

- ▶ Capacity increase (compared to 2008)



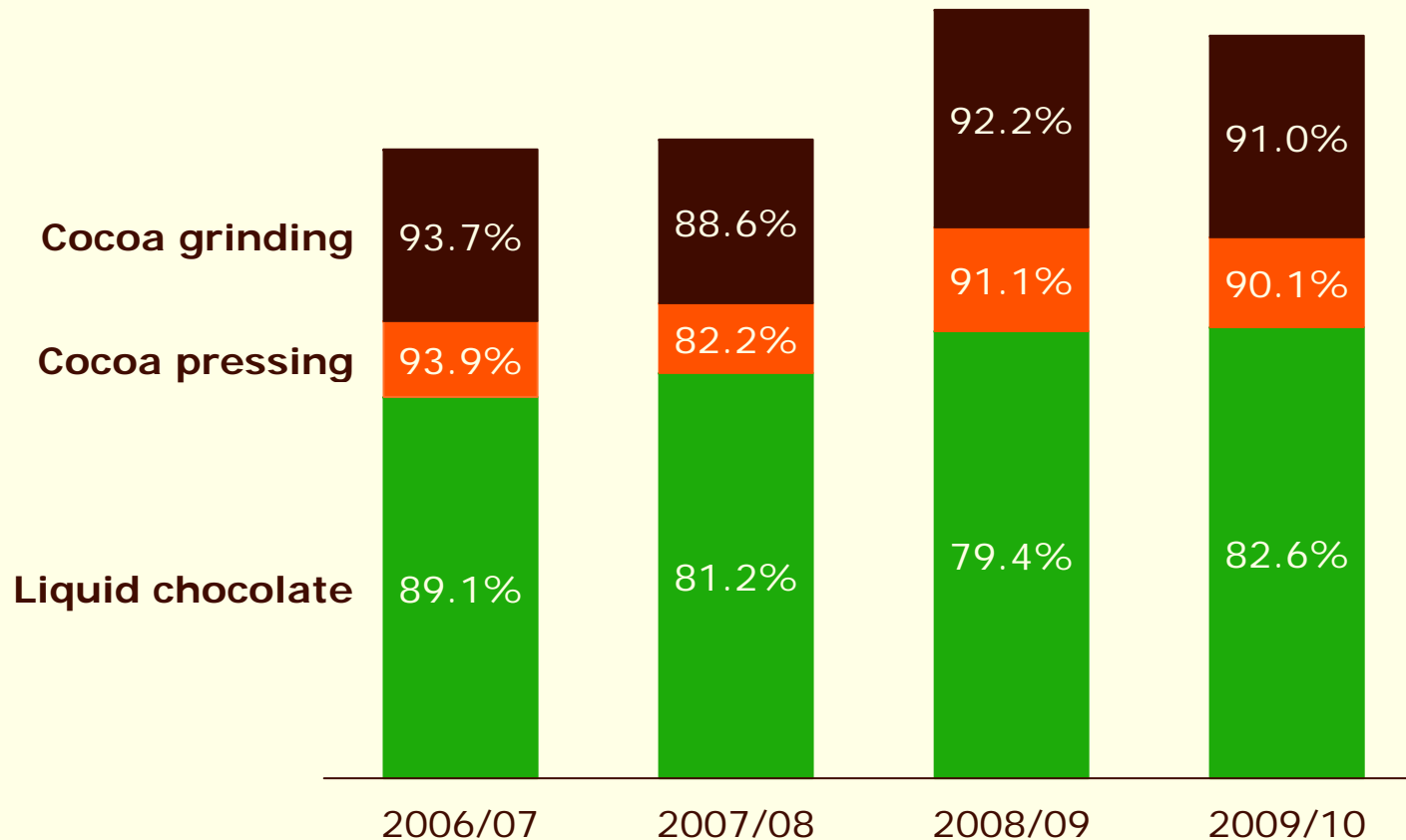
- ▶ Headcount evolution (factory headcount excl consumer)





An efficiently utilized manufacturing footprint in all production steps

Evolution of our capacity utilization





Continuous Improvement

Continuous improvement

One+



▶ Main Objectives

- ▶ Install a common process and way of working for the group
 - To improve the efficiency and the effectiveness
 - To improve transparency and interchangeability
 - To facility the rotation of people between sites and functions
- ▶ Create a pool of people that are ready to take over line functions
 - Get to know the (production) processes
 - Get to know the plants and the people
 - Experts in the continuous improvement methodomogy

▶ Implementation.

- ▶ Supported by an external specialist (on the job training)
- ▶ First focus on the plants:
 - Finalized 3 pilot sites (US, France and Japan)
 - Started with the wave 2 plants (Belgium, Malaysia & US)
- ▶ Next steps: Widen the scope to other processes and other functional areas

▶ Results achieved

- ▶ Yearly savings of about 4 mio Euro for the 3 pilot sites

Continuous improvement

One+



The methodology is focussing on a set of improvement levers, to achieve a performance driven organisation

IMPROVEMENT LEVERS

- Improve process knowledge
- Implement a systematic approach and usage of tools
 - Close monitoring of process performance
 - Systematic Root cause analysis
 - Implement Group Best practices
- Clear ownership per process (steps)

- Install common KPI system and usage
- Install performance oriented management meetings
- Facilitate fact based decision making and follow up
- Ensure common view on performance, top down & bottom-up

- Increase cross functional way of working
- Boost management skills and leadership at different levels and management visibility/involvement with the shop floor
- Resolve cultural and historical issues
- Reinforce competences in the organisation

- Mental switch towards performance focus in a structured and systematic way
- More transparency and predictability in results
- Moving from status quo/re-activeness to pro-activeness

SUSTAINABLE RESULTS

Financial
Operational
Cultural



Continuous improvement

One+

Summary of progress at American Canyon

One year ago...

- ▶ No 'real' root cause analysis
- ▶ We had bad meetings but didn't know it
- ▶ Managed from lagging indicators
- ▶ Production results not being challenged

- ▶ Little visibility to hidden production losses
- ▶ New team with potential, but little structure

Today...

- ▶ RCAs are done several times per week
- ▶ We know what a good meeting looks like
- ▶ KPIs are looked at daily & challenged
- ▶ A better understanding of OEE and its components
- ▶ Maximizing production capacity
- ▶ Better control of the operation and faster reaction to problems



Continuous improvement

Quality

- ▶ Background:
 - ▶ Quality requirements in the market are changing
 - ▶ BC wants to be leading from a quality point of view

- ▶ Implementation
 - ▶ BRC certification and site audits
 - Strengthening of the internal audit team
 - Sharing of issues and best practices
 - Training
 - ▶ Better separation on existing lines to avoid contamination
 - ▶ Investments
 - ▶ Increased awareness

- ▶ Results:
 - ▶ 29 sites are BRC certified





Continuous improvement

Strategic equipment sourcing

Through data analysis, interviews and workshops with the sites, the following main levers that will drive the savings for the technical spend were identified:

Proposed levers

- ▶ Create spend transparency.
 - ▶ Central repository for spend-data & site-needs
- ▶ Launch centrally led sourcing initiatives (focus on common categories across sites).
- ▶ Increase Low Cost Country Sourcing lever for technical goods.
- ▶ Leverage best practices & technical knowledge between sites.
 - ▶ Incl revisiting & standardization of technical specs.
- ▶ Evolve towards partnerships with key suppliers.

Advantages

- ▶ Full spend in scope → Leverage global buying power
- ▶ Spend consolidation and supplier reduction and maximize synergies across all sites/countries
- ▶ Realize significant benefits for standard goods with high volumes across the company
- ▶ Standardize throughout the company and realize TCO benefits (rather than focus on transactional cost)
- ▶ Ability to tackle processes behind purchases



Results achieved in 2010/11: Average 11% reduction on equipments in scope.

Continuous improvement

Investments

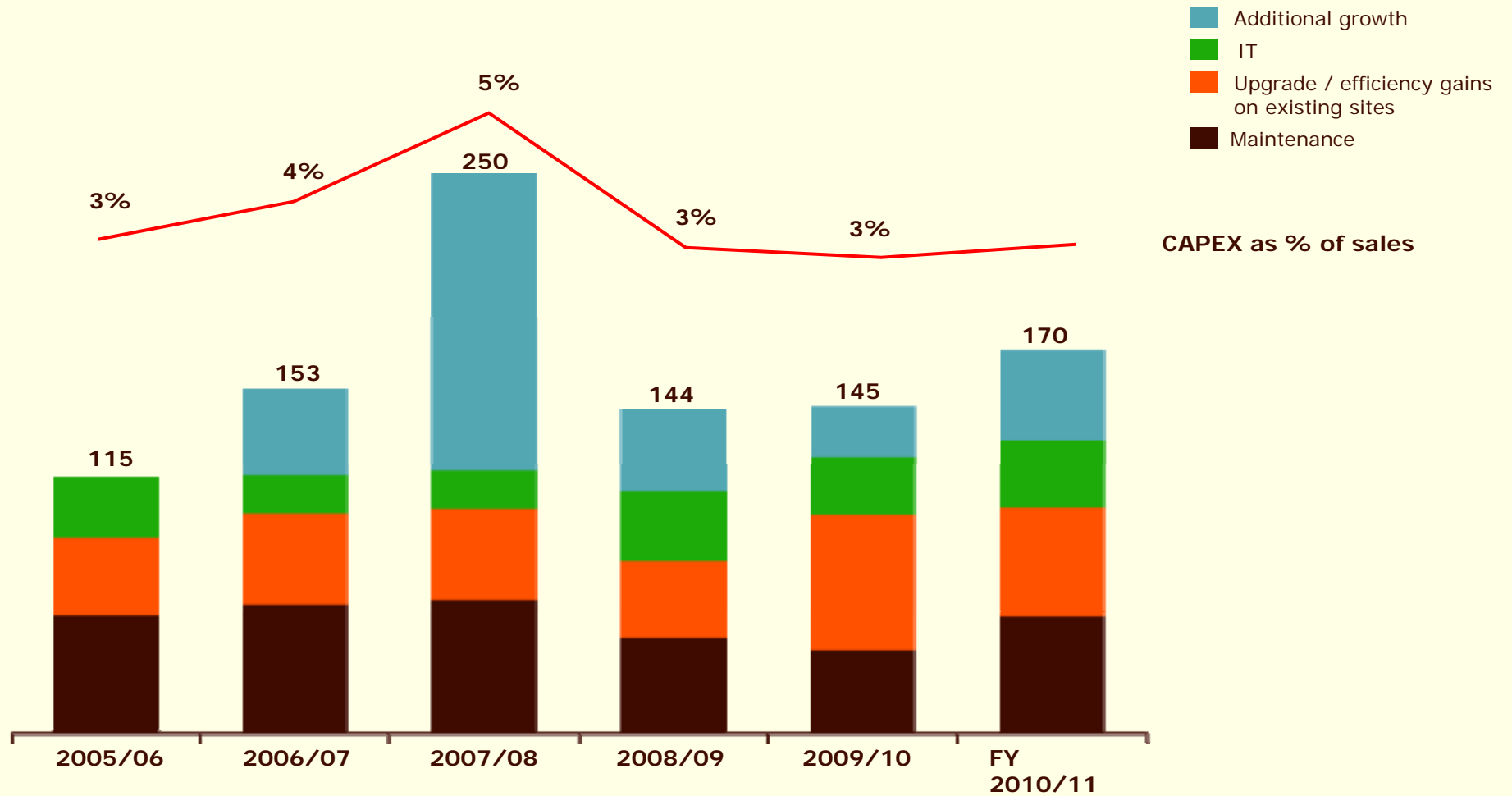


- ▶ Different types of investments in the plants
 - ▶ Capacity extensions: about 20 – 40% depending on requirements
 - New factories
 - New production lines
 - Upgrading of existing lines (new technology)
 - ▶ Replacements: about 20 – 25%
 - Replacement of outdated equipments
 - Upgrading of equipments and lines
 - ▶ Cost reduction: about 20 - 25%
 - Automation
 - Energy saving projects
 - Efficiency improvements
 - ▶ Quality improvements: about 10%
 - Plants and production lines
 - Products
 - Analysis equipment
 - ▶ Health and safety improvements: about 5%

Investments support the growth of our business



In CHFm





Process & Technology Development



Engineering

- ▶ Main focus: Doing more with existing equipment
Some examples:
 - ▶ High speed refining
 - ▶ Continuous conching and Salvator conching
 - ▶ High efficient hydraulic groups for presses

- ▶ Making production processes more energy efficient
Some examples:
 - ▶ New bean breaker → 20 – 25% reduction in gas consumption for roasting
 - ▶ Heating, cooling, heat recuperation etc.
 - ▶ Output improvements as mentioned above

- ▶ Improving process yields

- ▶ Low investment greenfield plant
 - ▶ Compact design
 - ▶ Modular build-up



Sales & Operations Planning



Sales and Operations planning

- ▶ Main objectives:
 - ▶ Achieve the required internal and external service levels (98% OTIF)
 - ▶ Manage capacity utilization (80-85% for chocolate – 90-95% for cocoa)
 - ▶ Reduce the stock coverage year-on-year
- ▶ Enhancement of the regional S&OP processes
 - ▶ Improved communication
 - ▶ Better forecasting
- ▶ Global S&OP
 - ▶ Align interregional flows
 - ▶ Report global inventory evolution and capacity utilization
 - ▶ Improved visibility to prevent unexpected regional demand
 - ▶ Coordinate the planning aspects on projects for global accounts
- ▶ Results
 - ▶ Stock coverage has improved by 10% over the last 3 years
 - ▶ Service levels have been stable or improved



Raw Material Optimization



Raw material saving projects

- ▶ Main Objectives
 - ▶ Recipe improvements: Work with R&D to reduce the costs of the materials
 - ▶ Better control and improvement of the yields in the plants
 - ▶ Reduction of waste and rework
 - ▶ Reduction of overweight
 - ▶ Transport optimization
- ▶ Implementation
 - ▶ Cross functional project teams are working under the lead of the regional OSCO managers
- ▶ Results achieved
 - ▶ Projects in Americas and Europe resulted in an annual saving of more than 14 Mio CHF





CSR

Energy Savings & CO2 reduction



CSR in Operations

Energy savings and CO2 reduction

- ▶ Target:
 - ▶ Reduce the CO2 emissions from the plants and owned DC's by 20% per ton over the next 4 years
- ▶ Results at the end of year 2:
 - ▶ Energy consumption per ton has been reduced by 11,8%
- ▶ Main actions taken: Examples
 - ▶ Awareness
 - Target setting and translation into bonus targets for key people
 - Introduction of KPI's with monthly reporting
 - Introduction of an energy management system
 - One of the key topics in the continuous improvement program
 - ▶ Process optimization
 - Output improvement on existing equipments and lines
 - Optimized shut-down procedures
 - Right sizing of equipments
 - Free cooling
 - Insulation
 - ▶ Technology
 - Installation of new breakers on the roasting lines to reduce gas consumption by 25%
 - New hydraulic groups on presses
 - Economizers on boilers and roasters



BC Competitive Advantages

- ▶ Footprint and size:
 - ▶ Economies of scale
 - ▶ Better capacity balancing
 - ▶ Backward integration (flow optimization)
 - ▶ Skill levels

- ▶ Process know how:
 - ▶ Experienced people in all operations areas
 - ▶ Constantly searching for new ways to make our products and to improve our efficiency

- ▶ State of the art equipment
 - ▶ Reliability and effectiveness
 - ▶ In line with the latest quality standards

- ▶ Flexibility combined with cost efficiency:
 - ▶ Focussed factories
 - ▶ Line dedication

