CLIMMAR Congress
Stockholm Sweden, 2015

We make sustainable food production possible

DeLaval

CLIMMAR Congress
Stockholm Sweden, 2015

Research & Development Automatic Milking

- and how DeLaval makes sustainable food production possible

Mats Nilsson, Director Engineering AMS

Tetra Laval and Delaval

TetraLaval Group

Tetra Laval

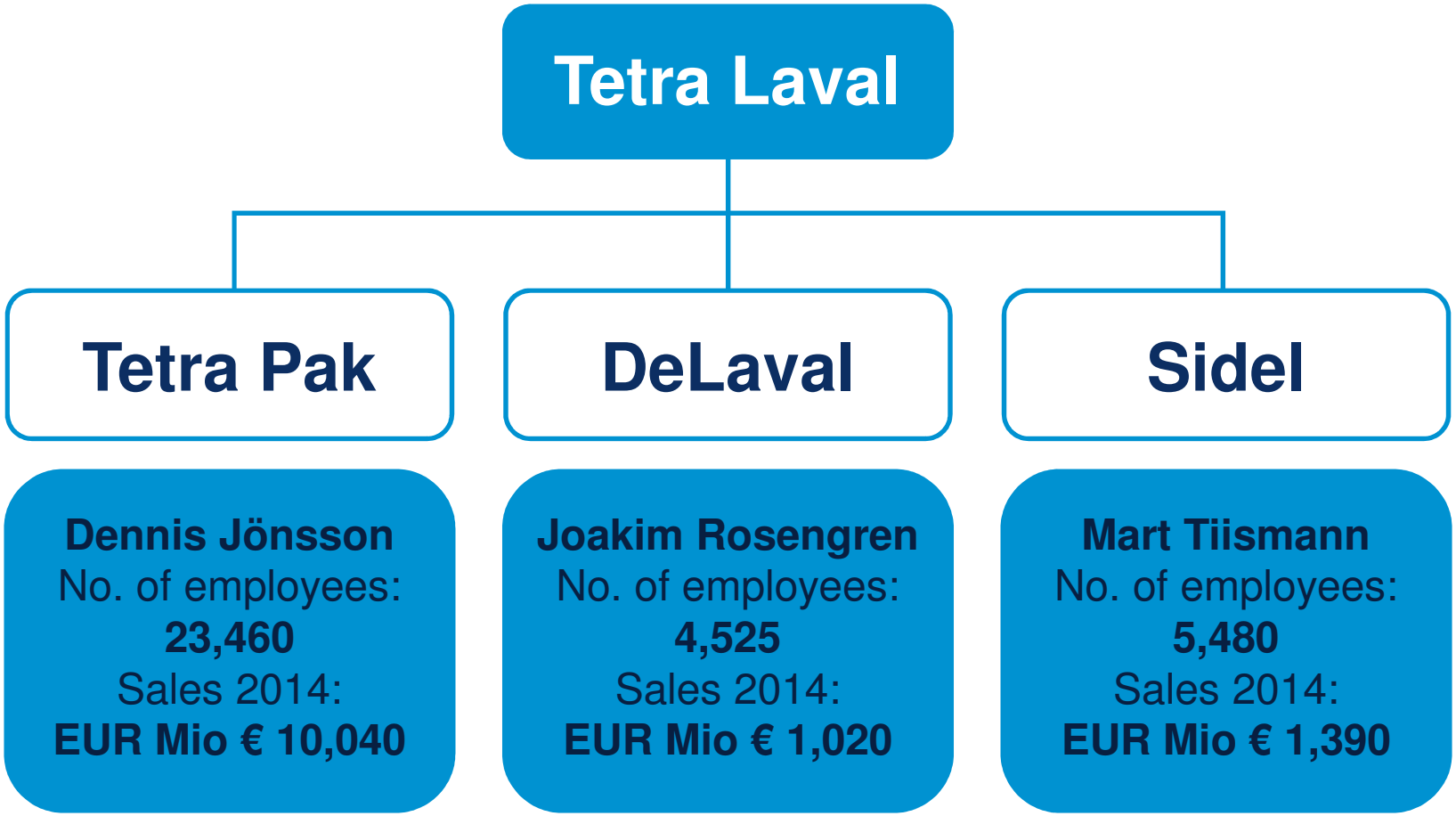
- **Tetra Pak**

- **DeLaval**

- **Sidel**

DeLaval

DeLaval is part of the TetraLaval Group



Public

DeLaval

Our vision

In tune with consumers, customers and employees around the globe

We make sustainable food production possible

DeLaval

Public

Meeting our customers

1, 464 sales representatives

1,166 dealers

670 mobile shops and delivery trucks

3,108 service technicians

Research & Development

130 years of innovation and experience in the dairy business

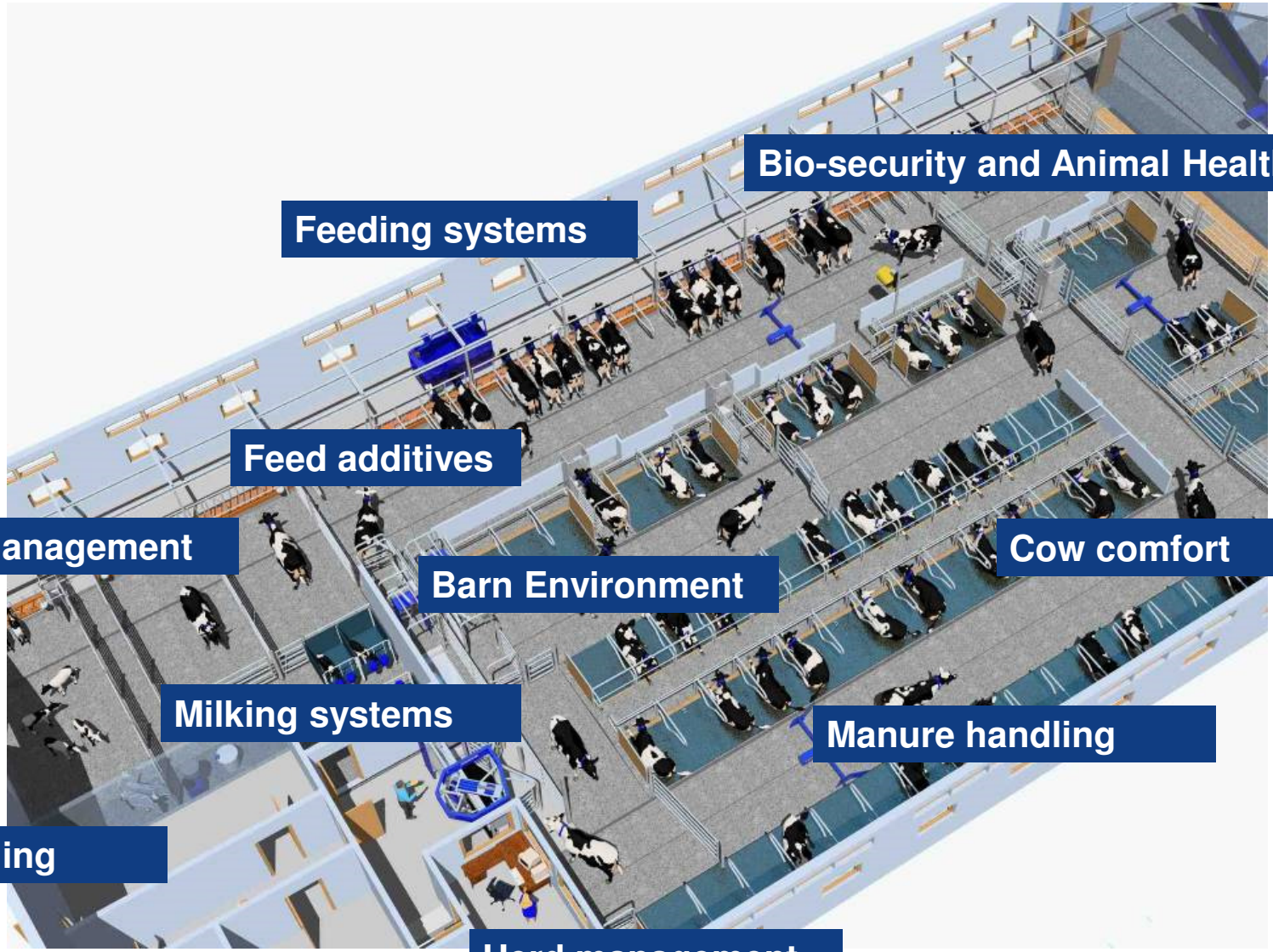
Public

DeLaval

130 years of innovations

Public

DeLaval offers a complete assortment



Public

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DeLaval VMS – Voluntary Milking System

2.00 VMS

https://www.youtube.com/watch?v=Aju_wqHhCBk

DeLaval AMR – Automatic Rotary

2.30 AMR

https://www.youtube.com/watch?v=bNhDOTBeTbE

DeLaval TSR – Teat Spray Robot

TSR

https://www.youtube.com/watch?v=-iE7nNXfhLY

AMS Research & Development

Steps

- Mech, EI , SW, Verification & Validation ⇔ Project office
- Inhouse vs Ext partners

1. Sweden Tumba – VMS & AMR/TSR Lab
2. Sweden Tumba - Hamra Farm
3. Test Farms in Sweden and abroad

- Concept & Feasibility Studies => Development projects
- **Requirements** ⇔ Design & Verification

All R&D projects are requested to use the following Sustainability Indicators, when applicable.

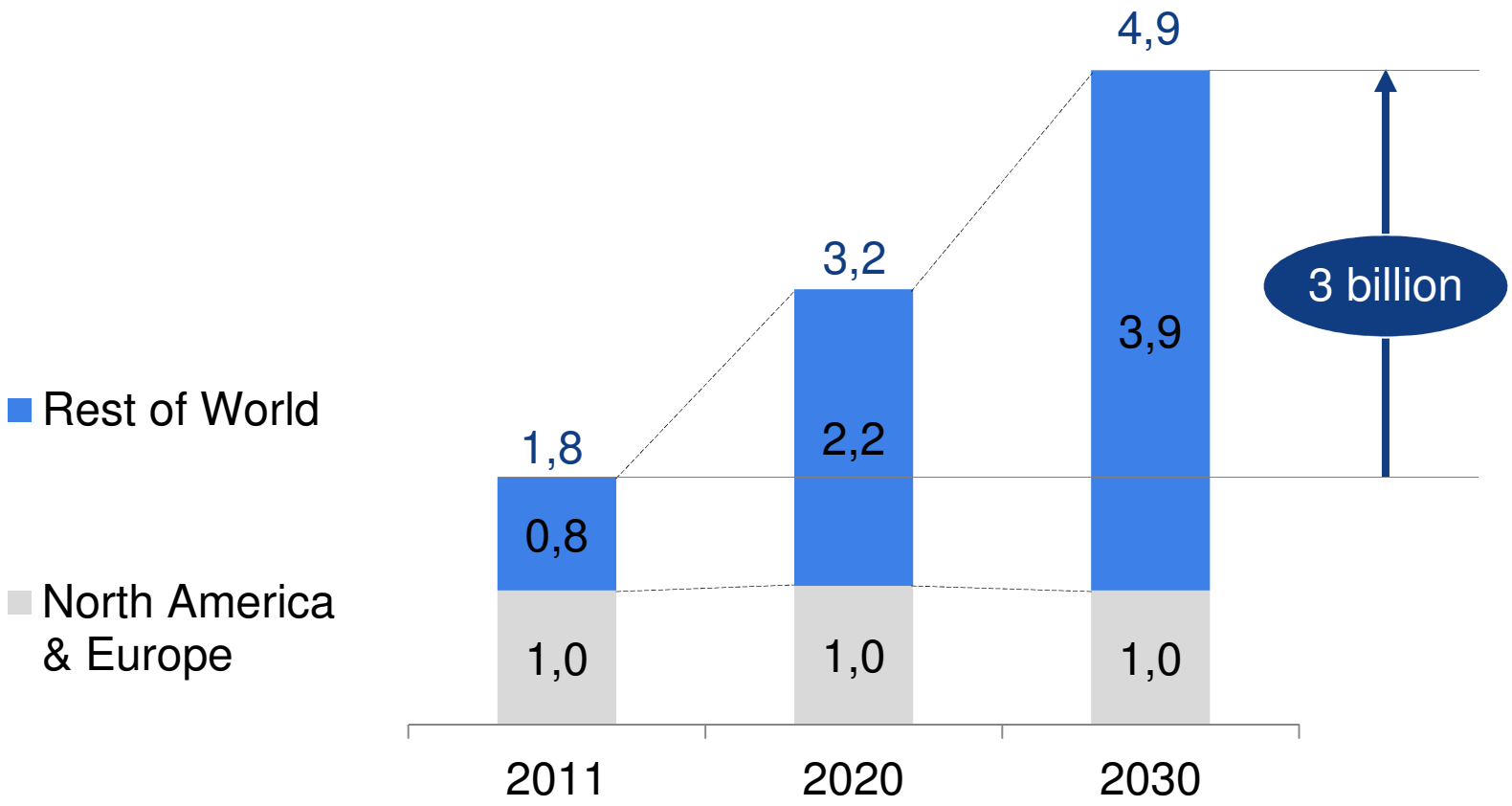
This will allow us to measure and communicate progress related to our Vision.

1. **Electricity consumption** of the article in use (kWh/liter of milk)
2. **Fresh water consumption** and waste water production of the article in use (Liter of fresh water/ liter of milk)
3. **Use of materials** including Hazardous substances in the solution and production of it. (In compliance/No substances on Black list/ No substances on Grey list)
4. **Working conditions** related to the operation and service of the solution. (**Ergonomics** related to installation, operation and service)
5. **Waste prevention** and reduction with efficient solutions, e.g. feed, waste, oil, consumables (reduction compared to previous solution or previous state/practice)
6. **Animal welfare improvement** resulting from the use of the solution (Reduced level of mastitis in the herd and/or of lameness in the herd)

Sustainability in agriculture

The emergence of 3 billion middle-class consumers

Global middle class* billions of people

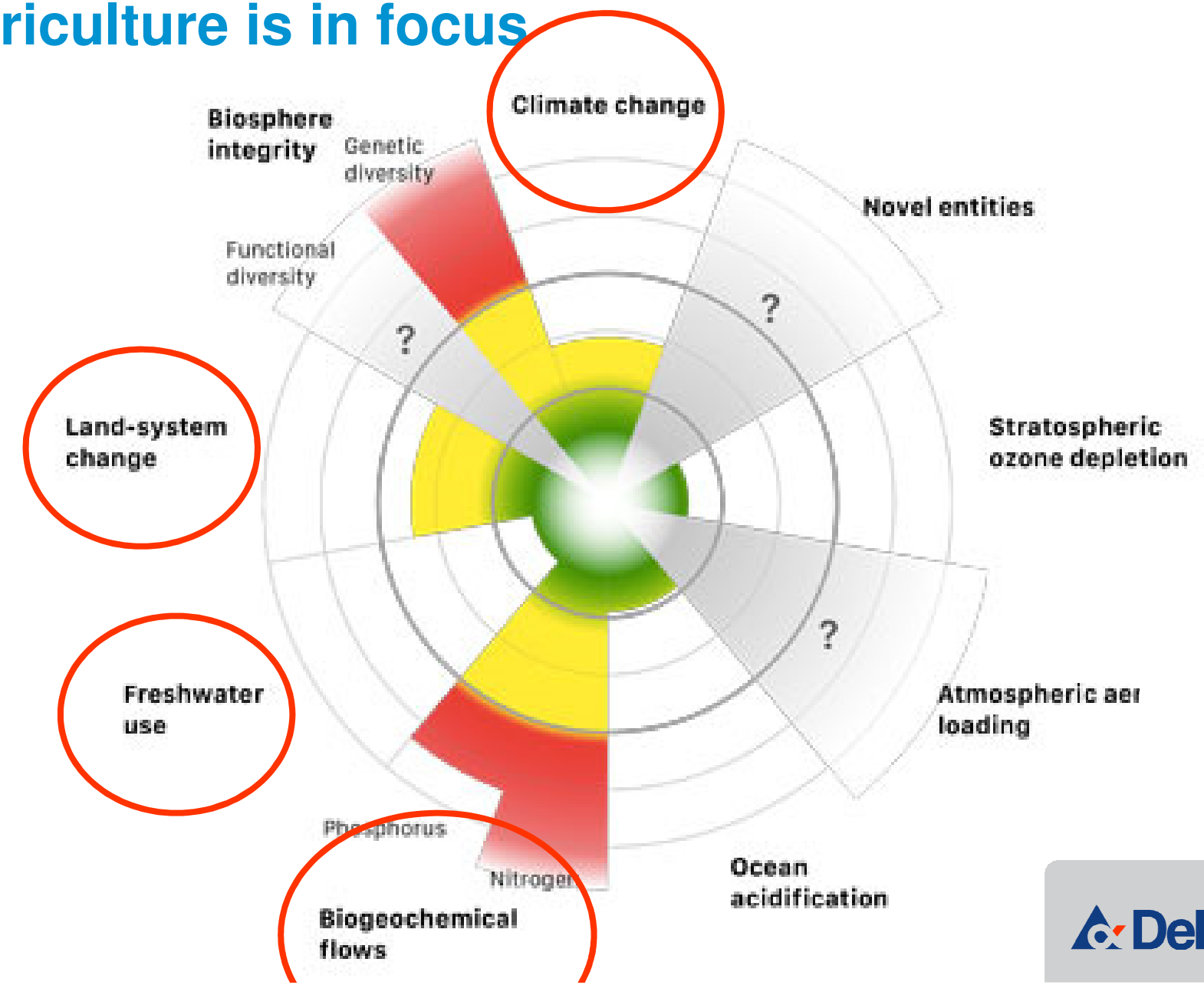


*Based on daily consumption per capita ranging from $10 to $100 (in purchasing power parity terms)
Source: OECD / McKinsey . 2011 datapoint based on UN statistics.

Challenges and opportunities

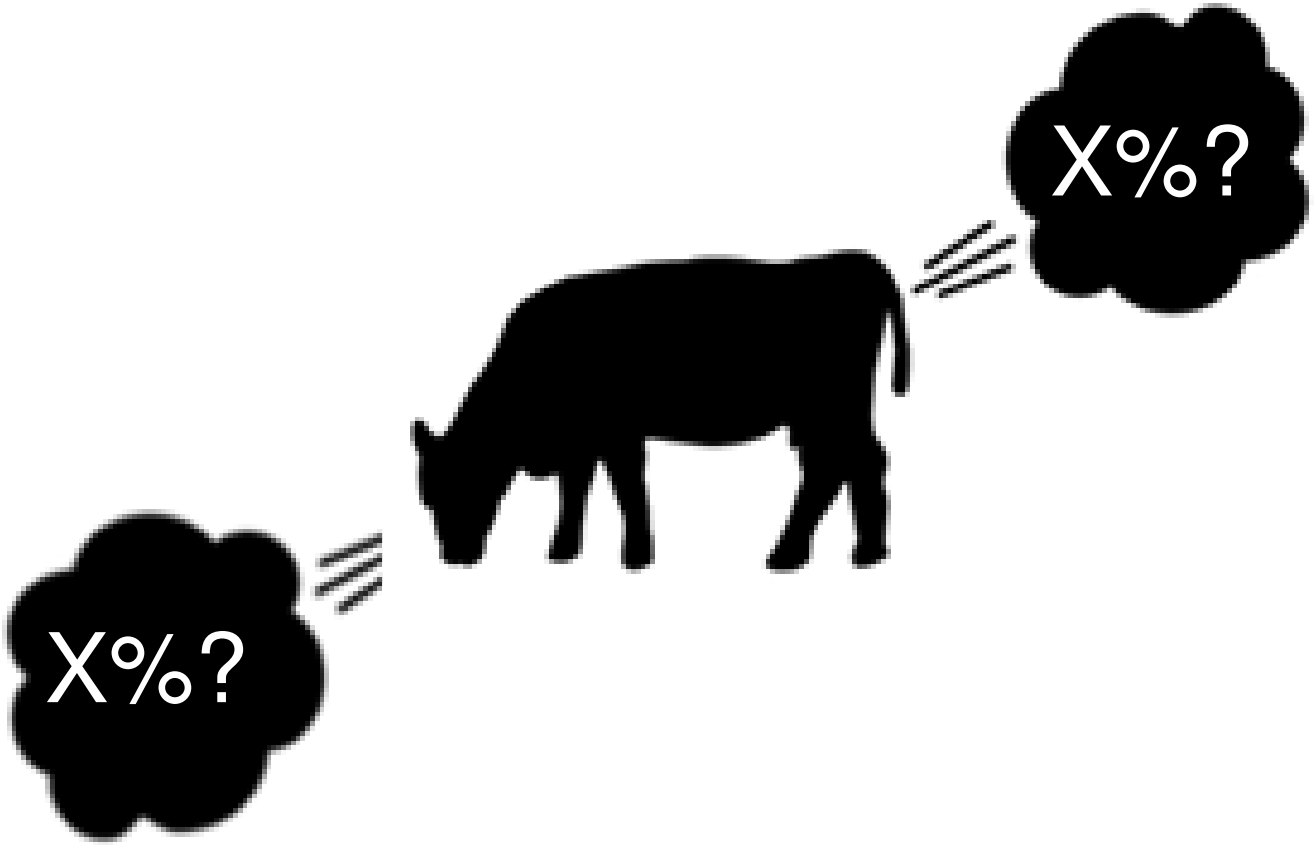
Public

Planetary boundaries
Agriculture is in focus



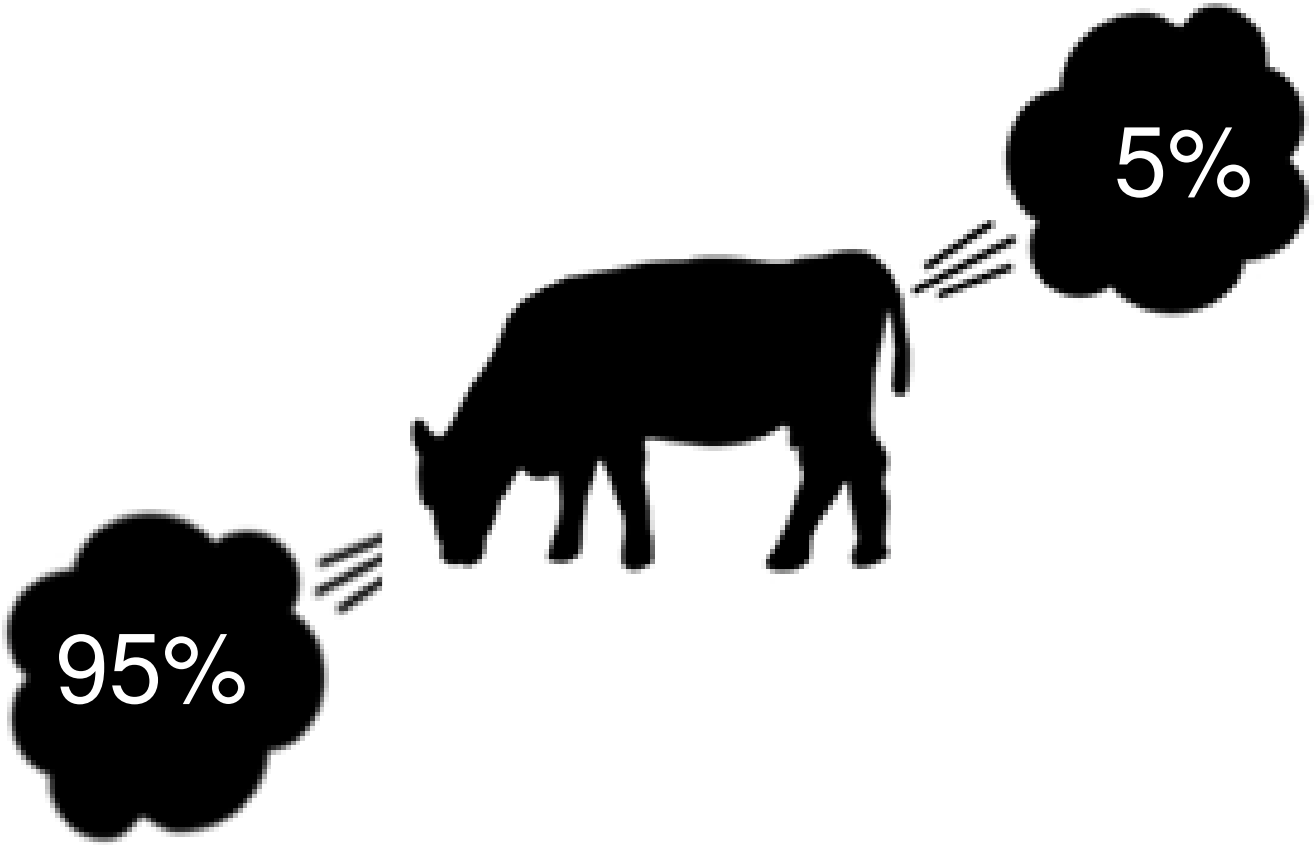
Public

Methane from the cow – why and where?



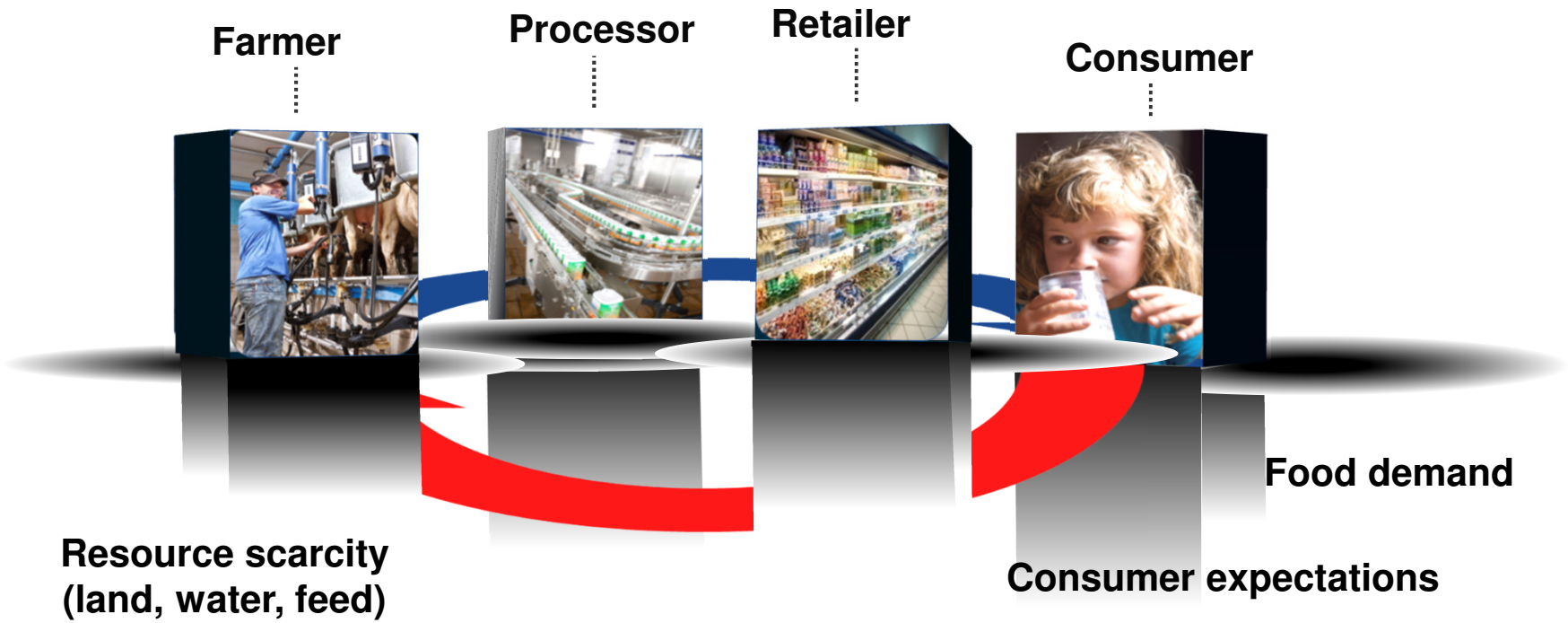
Public

Methane is formed in the rumen as part of their normal digestive process.



Source: Bulletin 422/2007,
International Dairy Federation (2007)

Focus on sustainability
Drivers for sustainable dairy farming

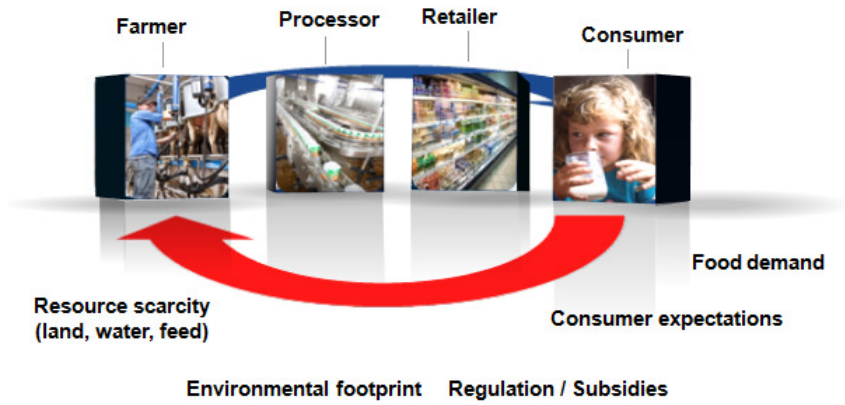


Environmental footprint Regulation / Subsidies

Public

Food sustainability

The main strategies



1. **Increased cooperation** between companies, NGOs, researchers and the public sector to produce/share proper data and to identify ways forward

2. Increasing demands for ”**sustainable sourcing**” result in requests for productivity improvements documentation and certification of supply chain performance with regards to ”sustainability”

3. Increased efforts to integrate ”sustainability” in business management by **improving productivity** (doing more with less), and **innovation** (doing better differently)

Public

DeLaval and sustainability

Our approach to sustainability

Public

Sustainable dairy farming – addressing productivity

Increasing demands on farmers around the world

- The need to produce more
- Labour management and availability
- The ability to expand in a profitable way
- Secure high-quality operations
- Reduce the cost of milk harvesting
- Do more with less
- Flexibility and choice of lifestyle
- Optimise the genetic potential

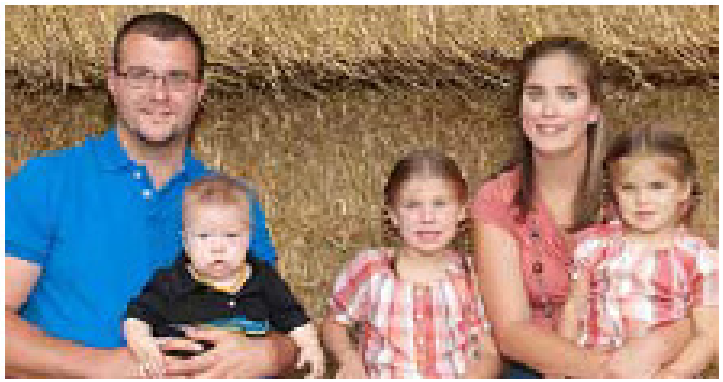
Internal

DeLaval

“We make sustainable food production possible”
by selling solutions and services that improve our customers’ performance.

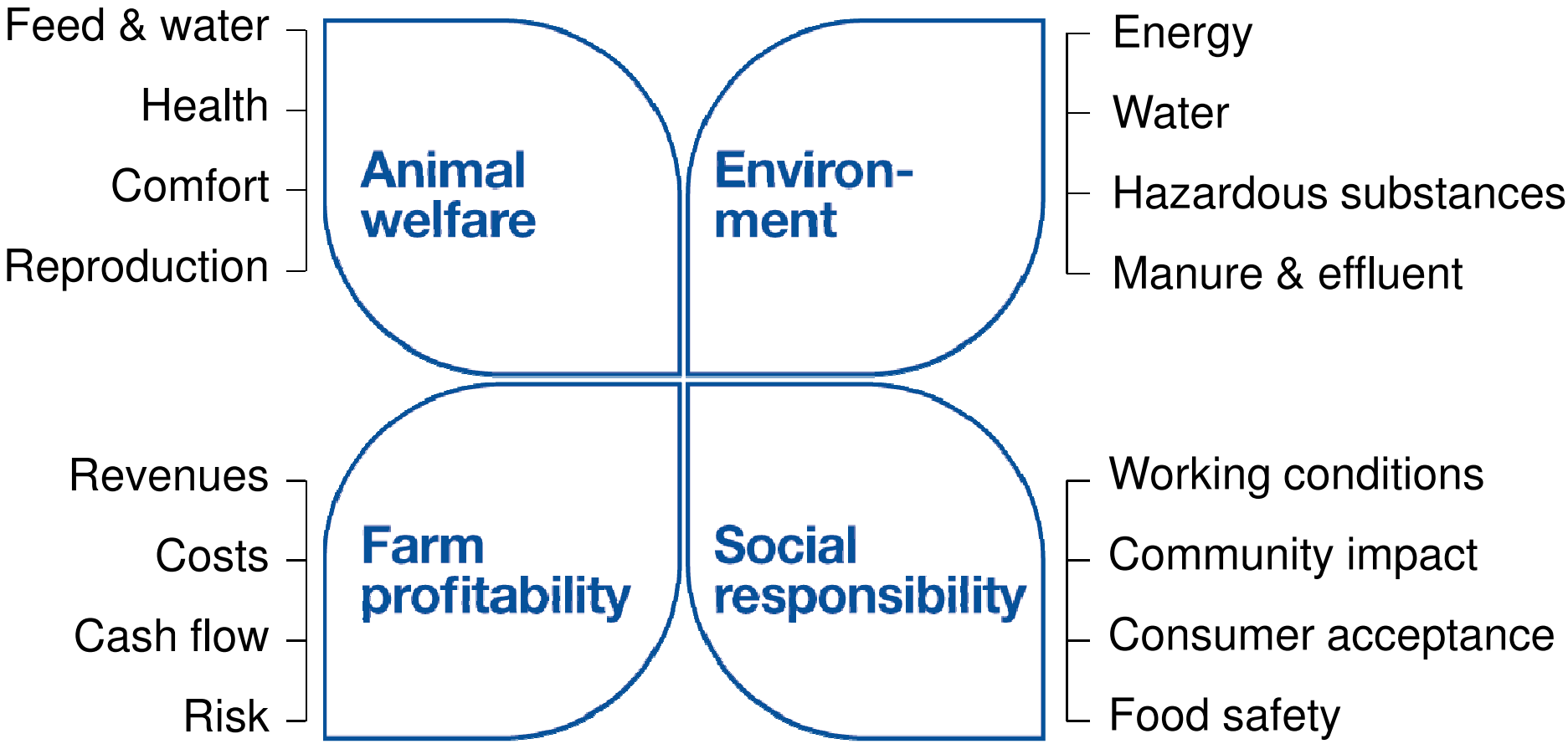






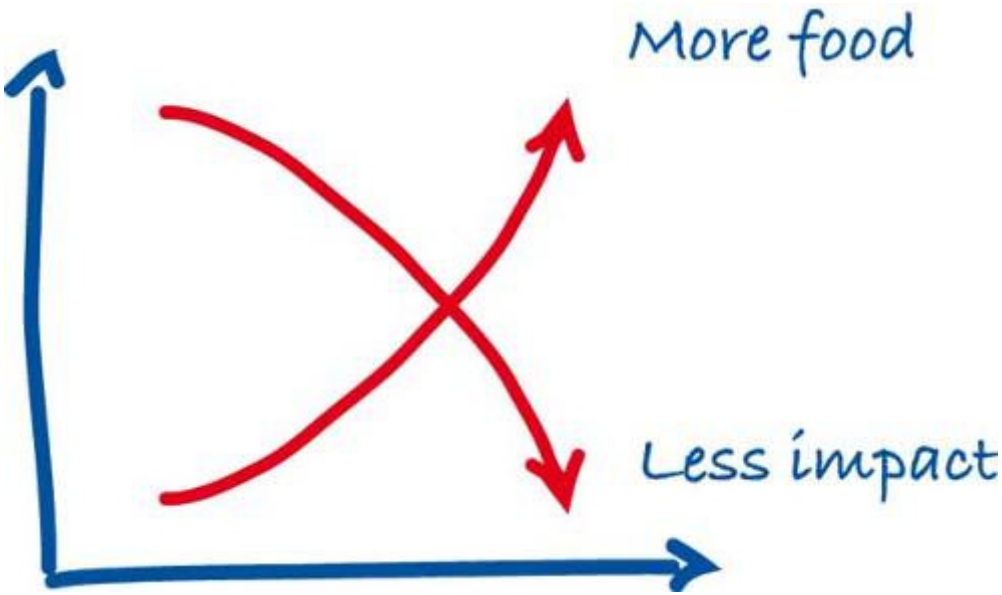

4 types of customer benefits

Improvements related to the other 3 pillars are often combined with economic benefits.



Internal

Doing more with less



Public

Innovation is key to improve farm productivity

Public

The best dish brush
– Sustainable & Environmentally friendly

MINITEST: **DISKBORSTAR**

Läs alla tester på icakuriren.se

Dyraste **borsten diskar** bäst

Det är stor skillnad på hur effektivt en diskborste diskar. En bra borste tar bort middagsresterna på tallrikarna med ett par tag. Det gör testets dyraste borste De Laval. FOTO ERIK HEDMAN

TESTAT AV GARANTI ICAKURIREN

Märke	Ikea	X-tra/ Coop	Fixa/ Axfood	Ica	Maria/ AB Rörets Inl	De Laval/ Granngården
Pris	5 kr	10:90 kr	11:90 kr	15:90 kr	17:90 kr	69 kr
Kommentar	+ Tät borste. Lagom långt skaft. – Liten borste. Stumt, klent och felvinklat skaft. Tål inte het panna, smälter.	+ – För mjuk och spretig borste. Klent och tunt skaft. Trubbig skrapkant. Tål inte het panna, borsten smälter. Sämst!	+ Stor bra borste. Greppvänligt skaft. Bra skrapkant. Tål het stekpanna. – Skaftet något för långt. Mycket prisvärd!	+ Bra skrapkant. Lagom långt skaft. – För mjuk och gles borste. Tål dåligt het stekpanna. Smuts samlas i skaftet.	+ Bra effektiv utbytbar borste. Bra vinkel på skaftet. Bra grepp. Följsam. – Tål dåligt het stekpanna. Smuts samlas i skaftet och i borsten.	+ Mycket effektiv och bra borste. Spänstiga strån. Bra skrapkant. – För långt och smalt skaft. Tål knappt het stekpanna.
Totalbetyg	♥	♥	♥♥♥♥	♥♥	♥♥♥♥	♥♥♥♥♥

Almost indestructible - possible to put in the dish washer!

Viktiga fördelar

- Mycket hållbar
- Miljövänlig och resurssnål
- Skrapkant och greppvänligt skaft
- Tål kokning och starka kemikalier

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2015-10-11

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