

Innovations for a better world.

How digitalisation contributes to global sustainability

Forum ö 2017

Stuart Bashford, Digital Officer



Bühler plays a relevant role in the food & feed industry.

65% of all wheat
production is
covered by Bühler
milling solutions.



50% of all cars
worldwide feature
die cast parts from
Bühler.

60% of all chocolate
is produced
on Bühler equipment.



30% of global rice
production is
covered by
Bühler solutions.

2020

4

BILLION
Connected people



\$4

TRILLION
Revenue Opportunity



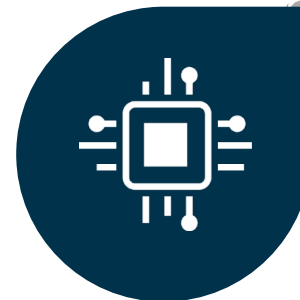
25+

MILLION
Apps



25+

BILLION
Embedded Systems



50

TRILLION
Gbs of data



Digital Manufacturing Driving Business Outcomes



**Reduced
Downtime**

48%

Unplanned
downtime down
from 11%
to 5.8%



**Reduction in
Defects**

49%

Defect rate
down from
4.9%
to 2.5%



**OEE
Improvement**

16%

Average OEE
improved
from
74% to 86%



**Reduction in
Energy Use**

18%

Annual energy
cost down from
\$8.4M
to \$6.9M

The cost of feeding the world today

24%

of global
GHG emissions
is from agriculture

69%

of total
Water usage
come from agriculture

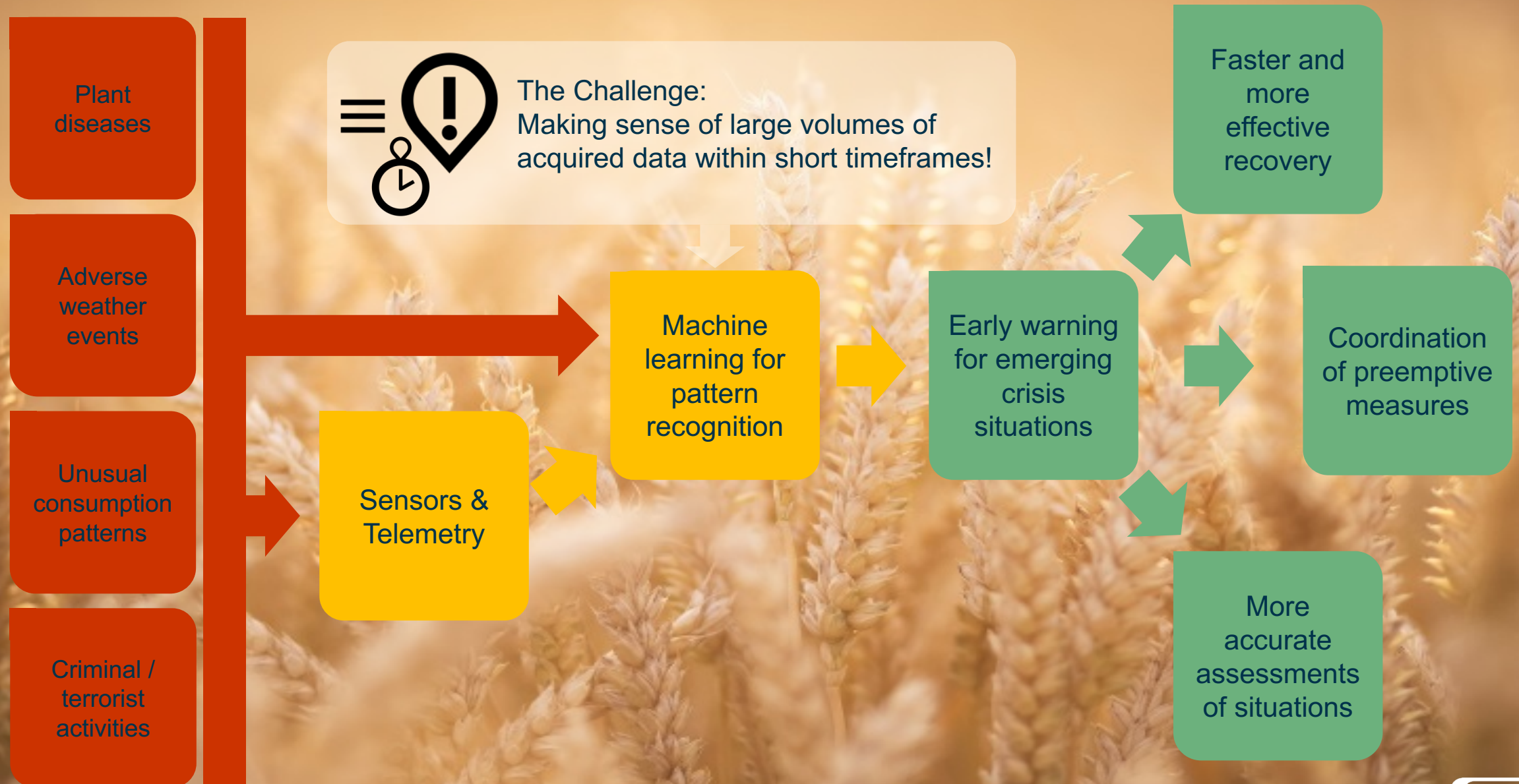
1/3

of global energy
goes into food
production from field
to table

1/3

of all food
produced
is waste

Digitalization is key to making the food value chain more resilient

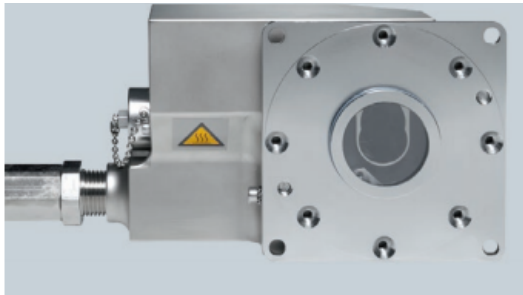


Intelligent sensors

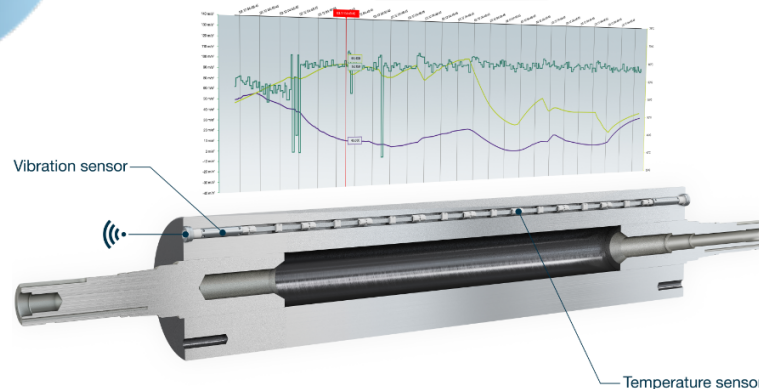
Bühler process knowhow

Collection of data is nothing without process knowledge.
Intelligent sensors provide real-time quality measurement.

Consistent
product
quality



Optimized
process
control



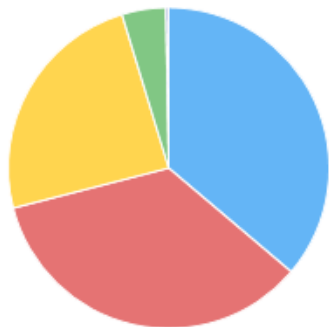
Online
color &
speck
analysis



Real-time
particle size
measurement
& control



Sources

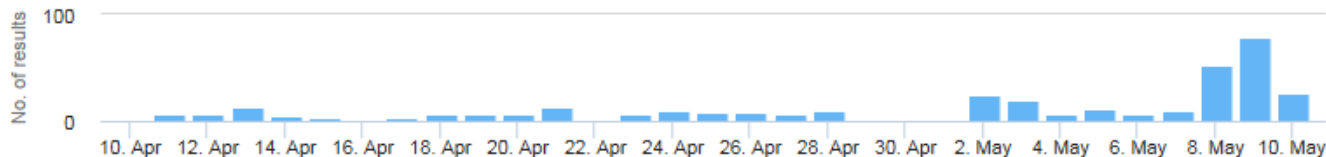


Twitter News
▲ 1/3 ▼

Product Categories

Top 10 values	#
food contact materials	101
prepared dishes and snacks	97
feed materials	73
cereals and bakery products	67
herbs and spices	37
nuts, nut products and seeds	37
confectionery	24

Timeline



Products & Hazards



Lee Piekarz
@MinnNephilim

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Consumers find glass fragments; Publix recalls deli dip
- foodsafetynews.com/2017/05/consum...

12:47 PM - 10 May 2017



Consumers find glass fragments; Publix rec...

Customer complaints about glass fragments in Publix Deli artichoke and spinach dip spurred the Southeastern retail grocery chain to recall the foodsafetynews.com



Suen
@suencs

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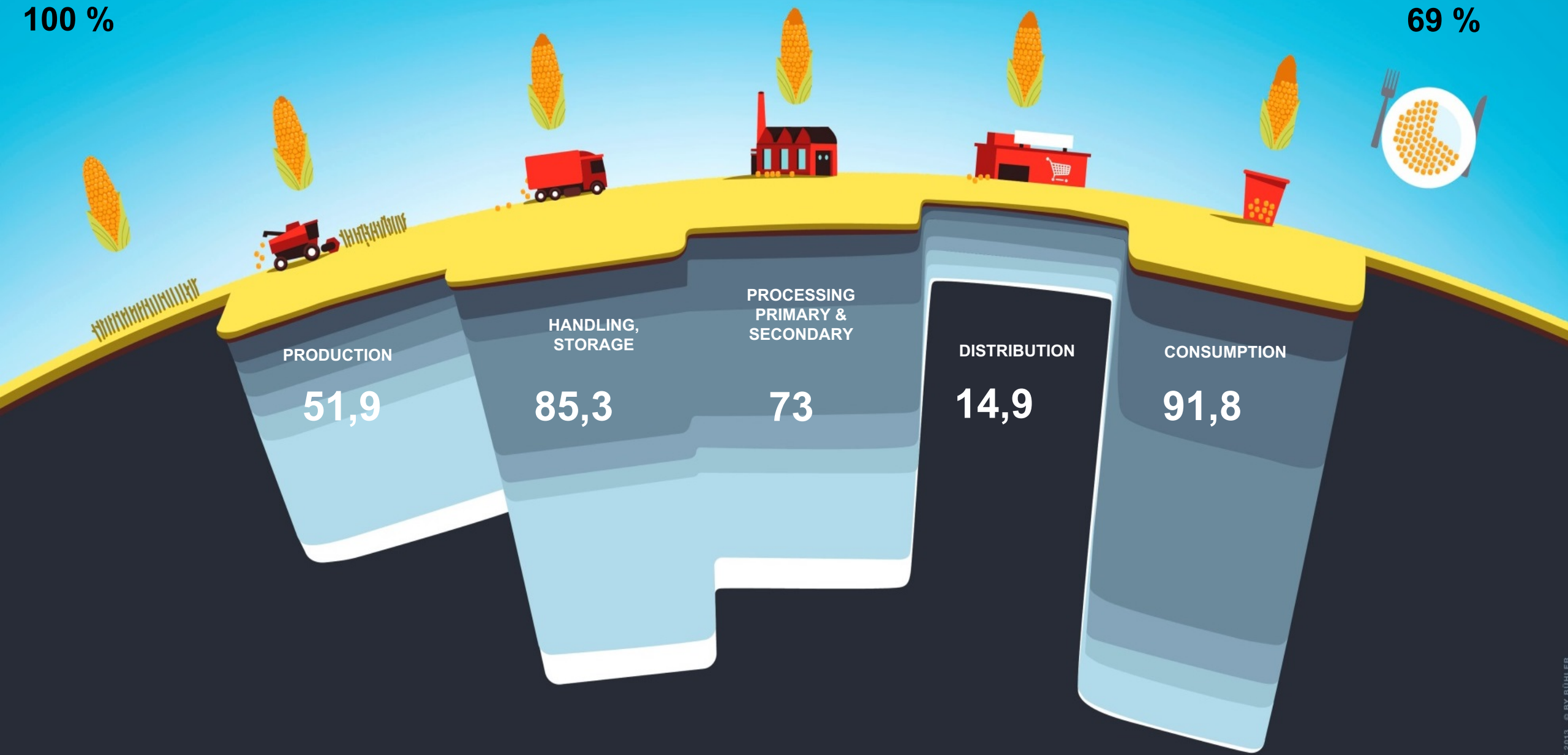
10/05/17: Consumers find glass fragments in dip
foodsafety.suencs.com/?p=46339

12:12 PM - 10 May 2017

LOSS OF CEREAL-BASED FOOD IN TONS (MILLION)

100 %

69 %



Sustainable value chains drive our innovation

Innovations for a
better world.

