

# ColorSensing

Smart packaging  
to reduce food waste



INSA

Institut de Recerca en Nutrició  
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UNIVERSITAT DE BARCELONA

EXCELENCIA  
MARIA  
DE MAEZTU  
2023-2026



Campus  
de l'Alimentació  
Universitat de Barcelona



**1/3 of all food is  
lost or wasted<sup>1</sup>**

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***\$ 990 bn***  
***of loss every year***

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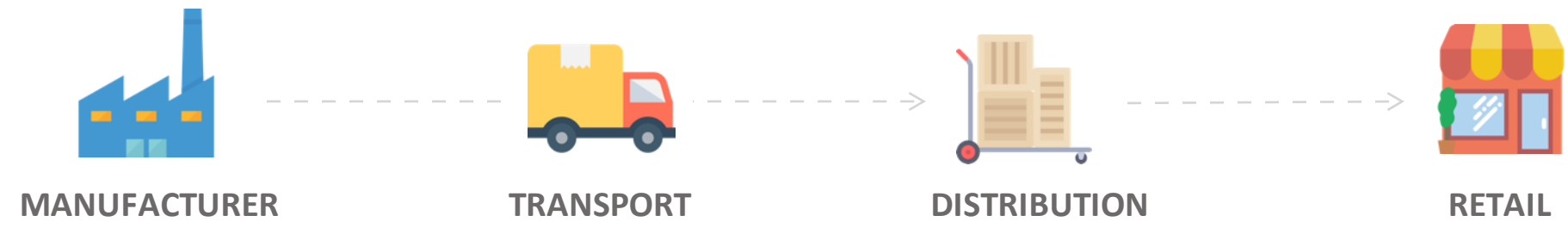
<sup>1</sup><http://www.fao.org/save-food/resources/keyfindings/en/>

# The problem in the food supply chain



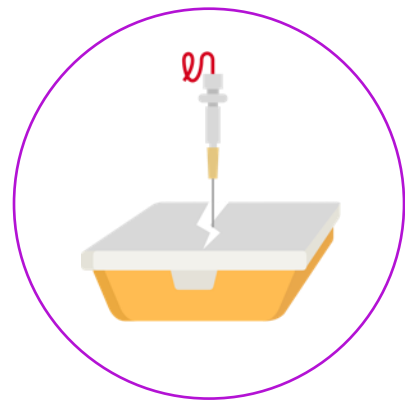
**PACKAGED FOOD MANUFACTURER**

# Causes of waste





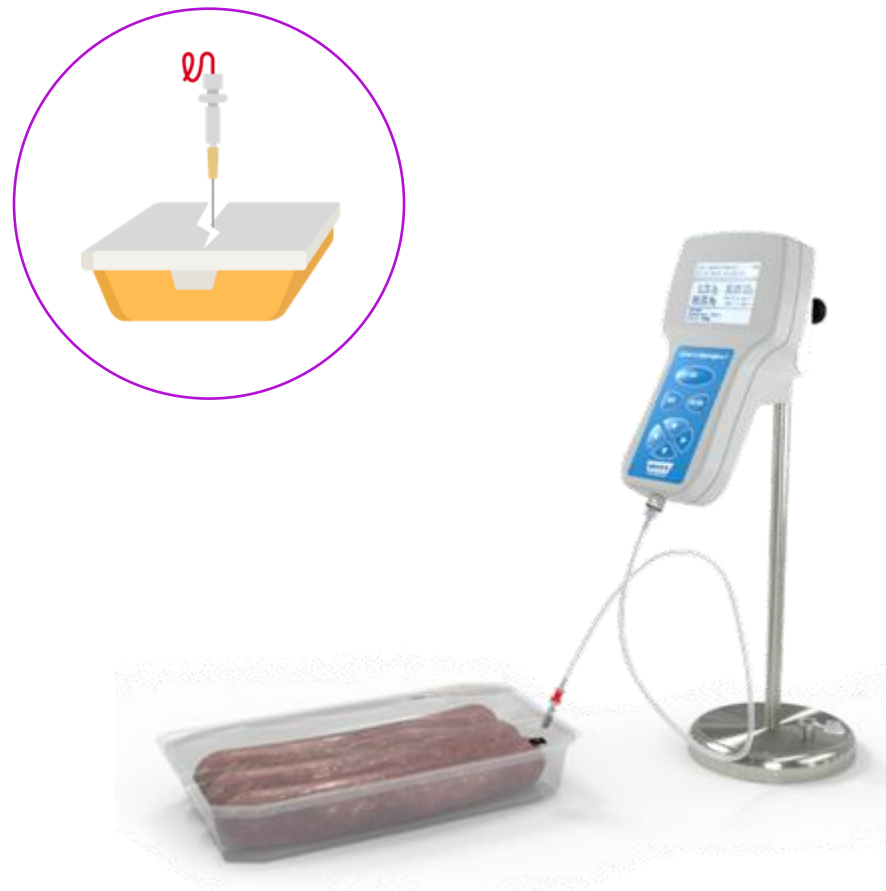
## Expensive & Destructive Random Quality Controls





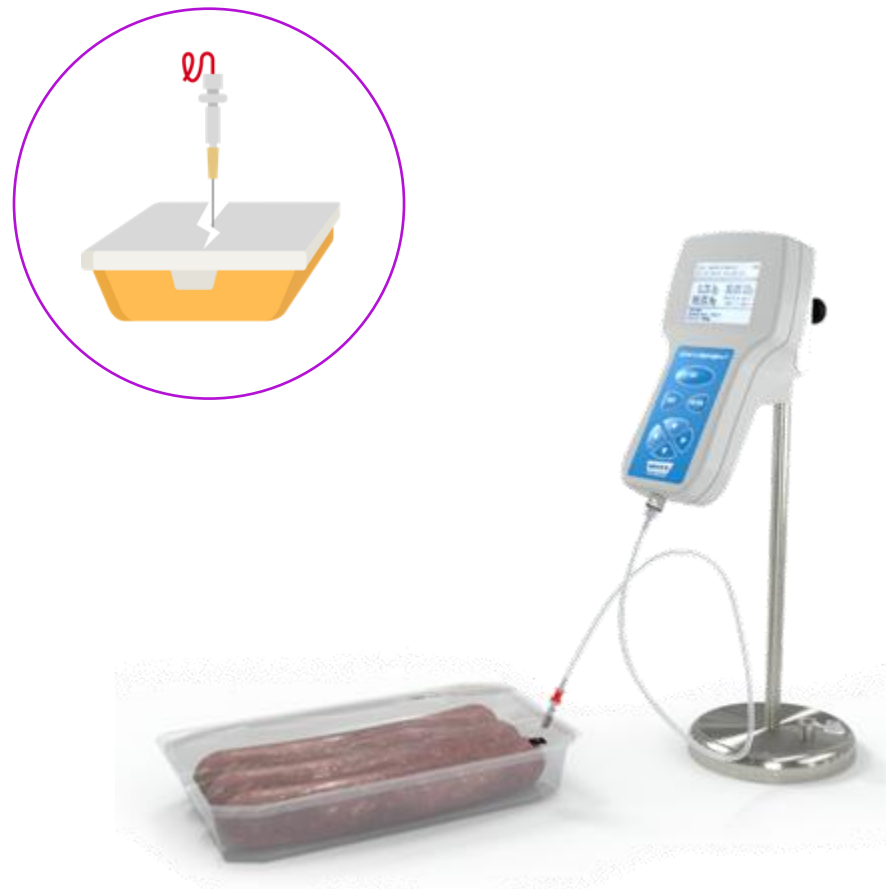
Expensive & Destructive  
Random Quality Controls

Loss of Control  
Out of The Factory

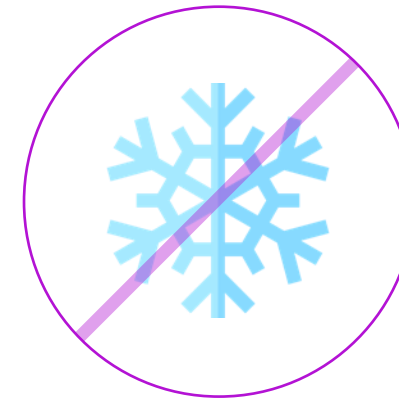




Expensive & Destructive  
Random Quality Controls

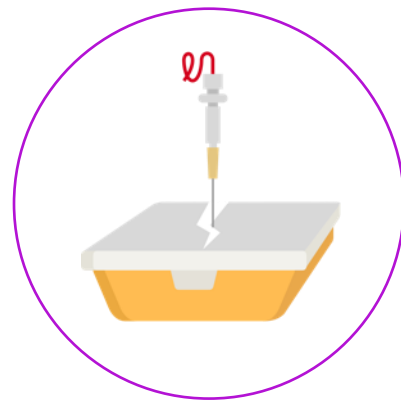


Loss of Control  
Out of The Factory

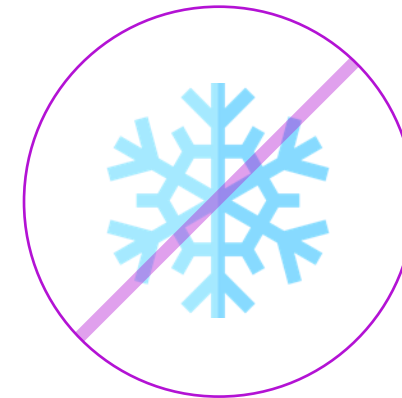




Expensive & Destructive  
Random Quality Controls



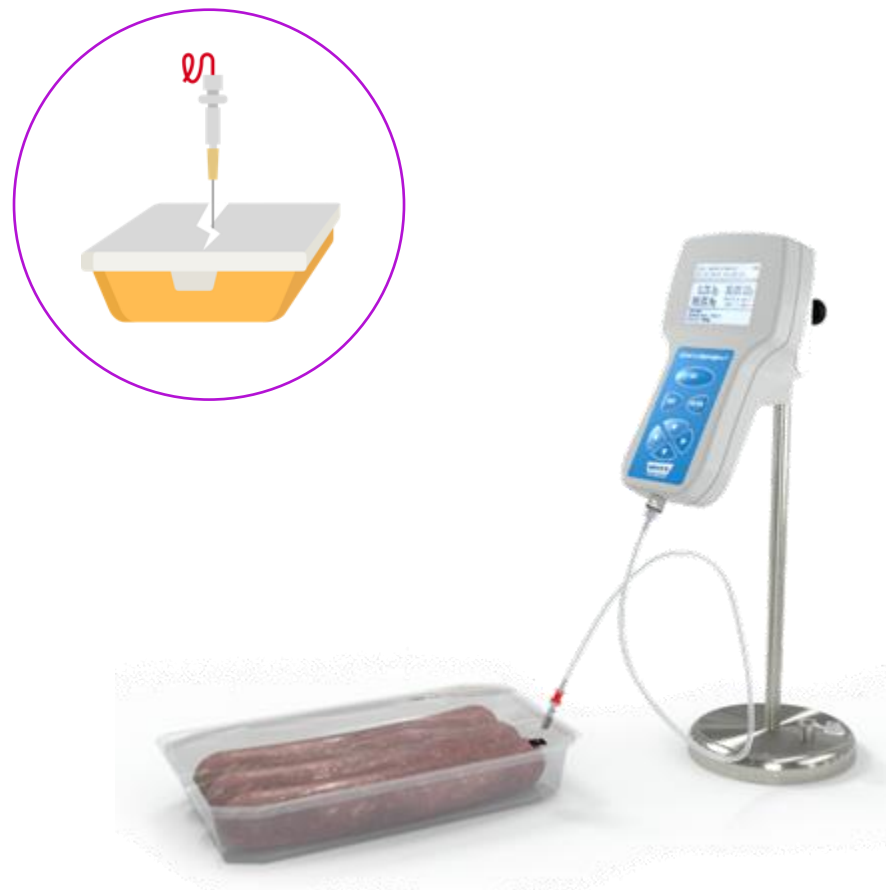
Loss of Control  
Out of The Factory



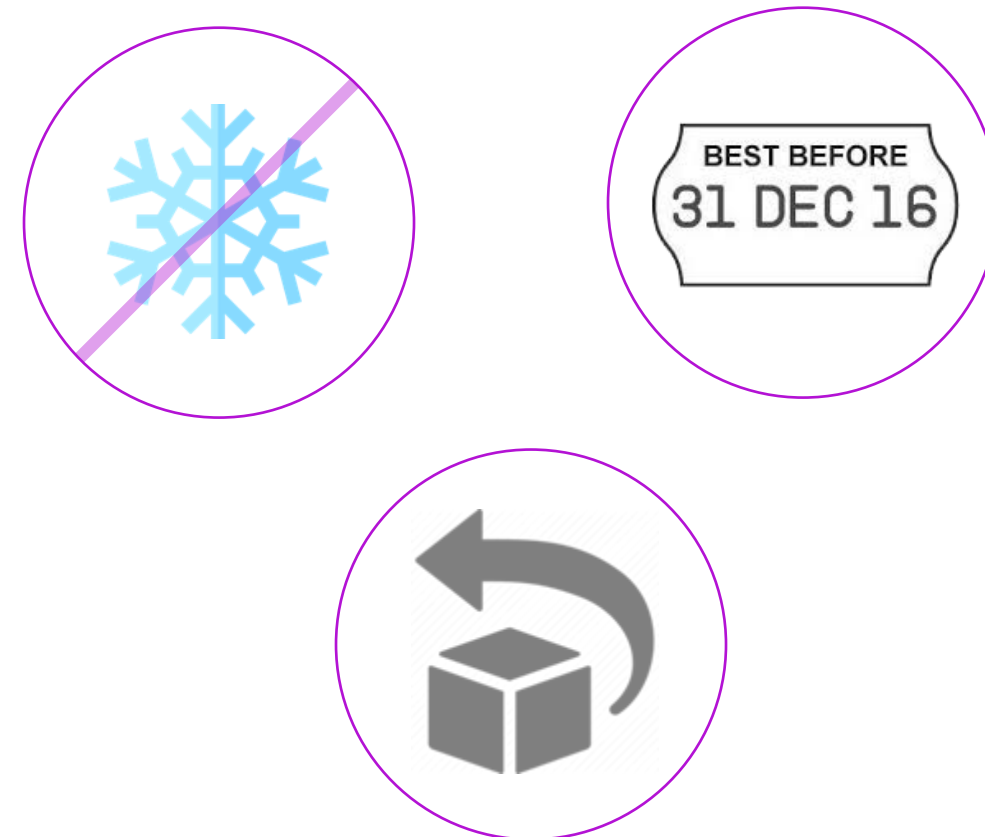




Expensive & Destructive  
Random Quality Controls



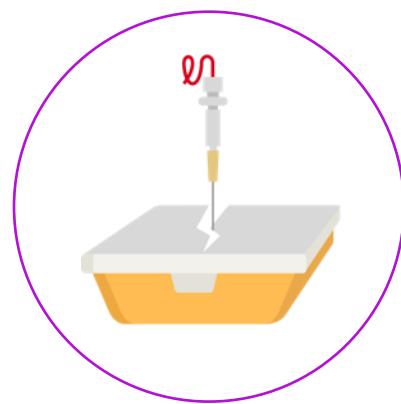
Loss of Control  
Out of The Factory



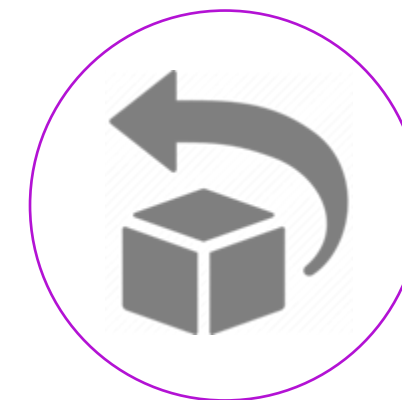
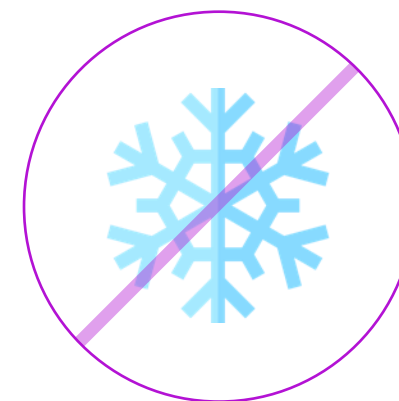


## Lack of information

Expensive & Destructive  
Random Quality Controls



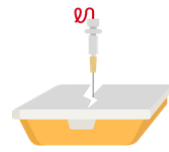
Loss of Control  
Out of The Factory



# Value proposition: information for profitability



## Features



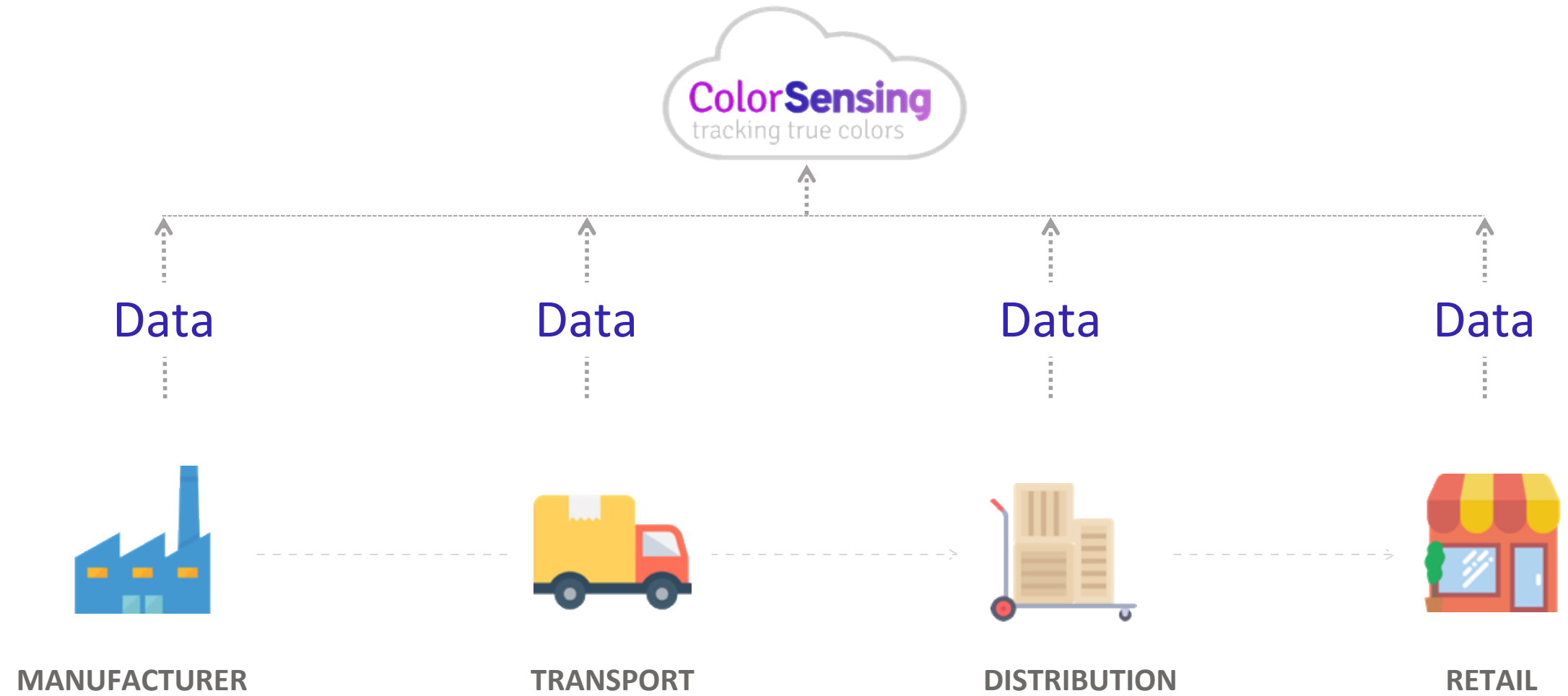
Sealing quality



Freshness



Cold-chain breaks

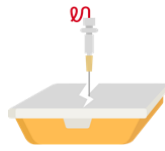


# Value proposition: information for profitability

ColorSensing



## Features



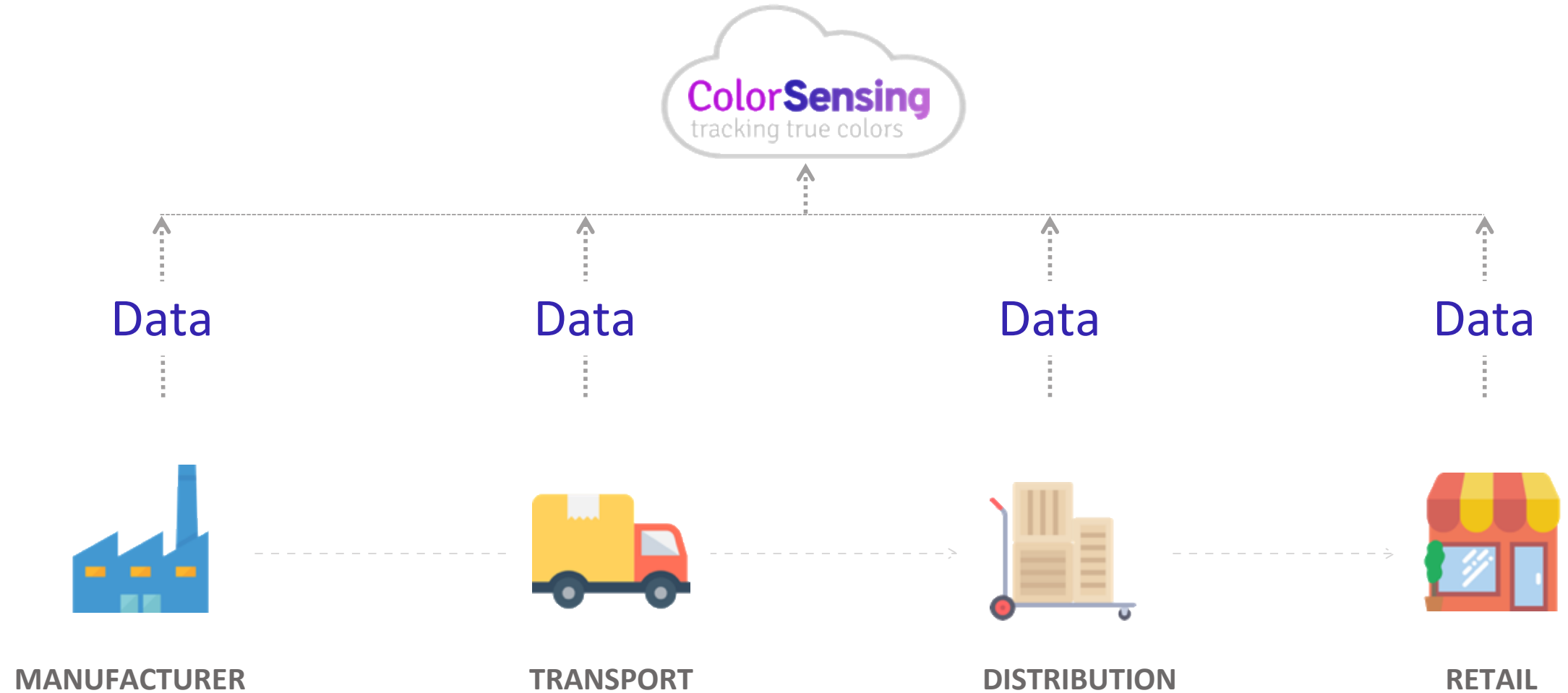
Sealing quality



Freshness



Cold-chain breaks



## Benefits

↑ savings

↑ safety

↑ sustainability

Savings on:

↓ returns

↓ quality control cost

↓ sale discounts

↑ 15%  
of profit

## Smart label



# Our Smart Packaging Solution

ColorSensing

Smart label

Smart inks



# Our Smart Packaging Solution

ColorSensing





Smart label

Smart inks

Smart reading



*Incremental technology for a multifunctional solution*

				
<i>Functionality</i>	<b>Traceability</b>	<b>Packaging Quality</b>	<b>Freshness</b>	<b>Cold Chain</b>
<i>Value</i>	<ul style="list-style-type: none"> <li>✓ Internal tracking</li> <li>✓ Customer oriented information</li> </ul>	<ul style="list-style-type: none"> <li>✓ 100% Control</li> <li>✓ NON-INVASIVE</li> <li>✓ Packaging analysis</li> </ul>	<ul style="list-style-type: none"> <li>✓ Avoid returns</li> <li>✓ Info real vs expiry date</li> </ul>	<ul style="list-style-type: none"> <li>✓ Break detection</li> <li>✓ Cause analysis</li> <li>✓ Accountability claim</li> </ul>
<i>Information</i>	<b>Product data</b> Nutritional Origin Brand, web, videos Upselling Loyalty program	<b>Packaging gases</b> ✓ CO <sub>2</sub>	<b>Ripening gases</b> ✓ CO <sub>2</sub> ✓ Amines O <sub>2</sub> (developing) H <sub>2</sub> S Ethylene ...	<b>Temperature alert</b> T (PoC)



## scalable volume-based Subscription Model



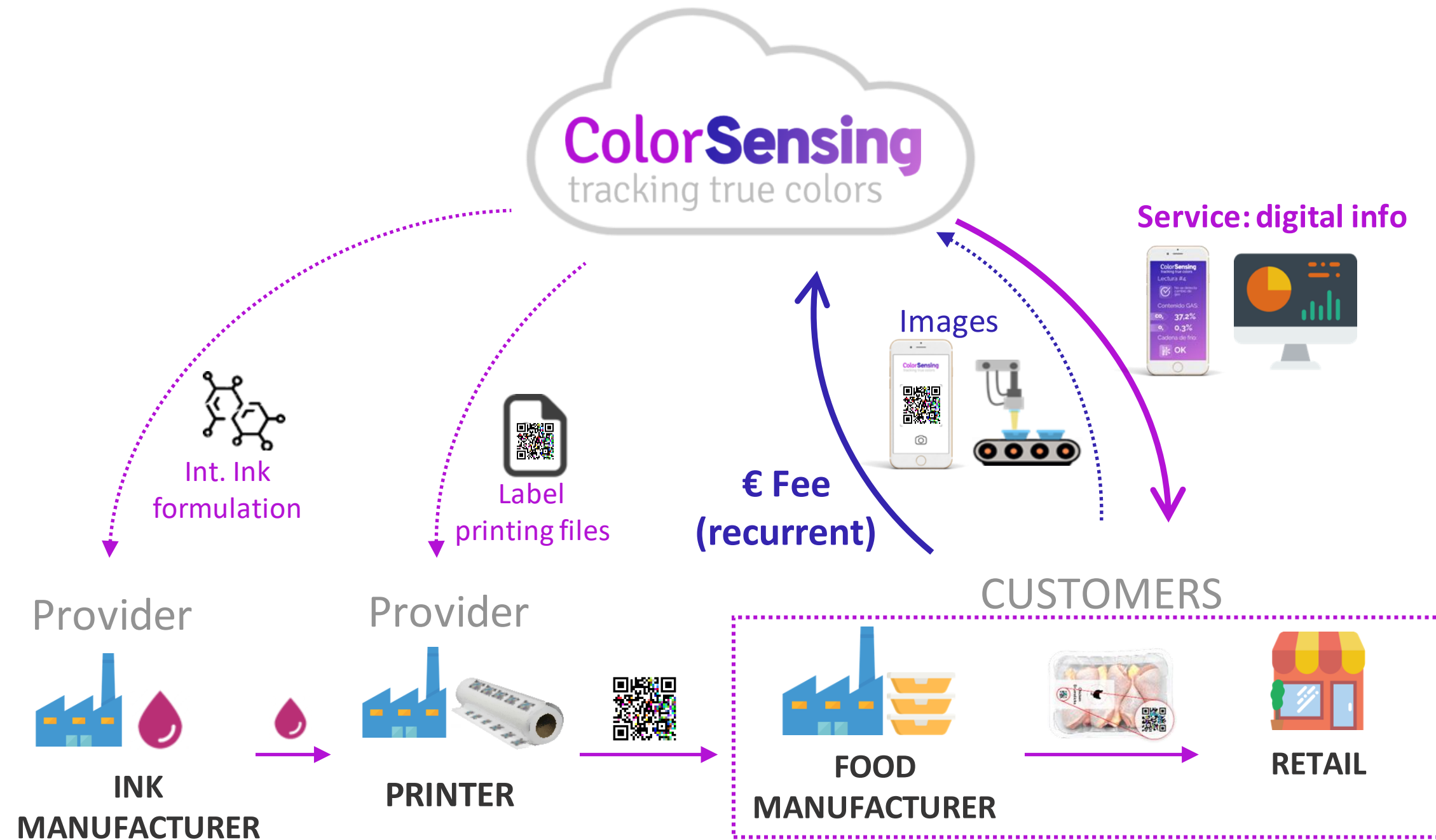
labels



label reading  
service

# Value chain & Go to Market

The *ink manufacturer produces the ink* and sends it to the printer



# Team

ColorSensing



**Dr. J. Daniel Prades**  
CSO, Co-founder  
Physics,  
PhD Nanoscience



**M. Eugenia Martín**  
CEO, Co-founder  
Business, Innovation,  
Industrial Engineering



**Miriam Marchena**  
CTO  
Chemistry Engineering,  
SW, PhD Photonics

+6 tech team  
**We are hiring!**

# Investors



Spin-off



**Jaume Amat**  
CEO  
Rob Surgical



**Josep Maria Martorell**  
Associate Director  
Barcelona  
Supercomputing  
Center



**Ramon Pujol**  
Entrepreneur &  
Investor: T4XI,  
Delivera,  
WorldCoo, Clintu

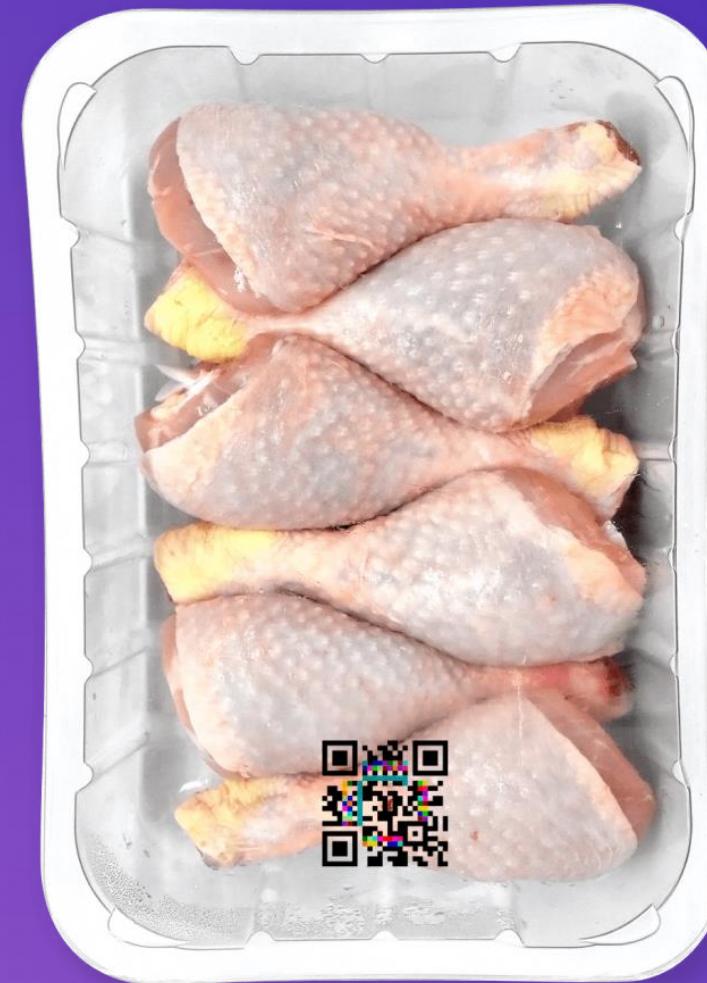


**Marc Delgado**  
Director Sensotran  
& RAE

*Smart packaging to cut down food waste*

# ColorSensing

tracking true colors



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