

EPSRC CENTRE FOR INNOVATIVE
MANUFACTURING IN



Eco-Intelligent Management of Food Supply Chain

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Manufacturing Food Futures
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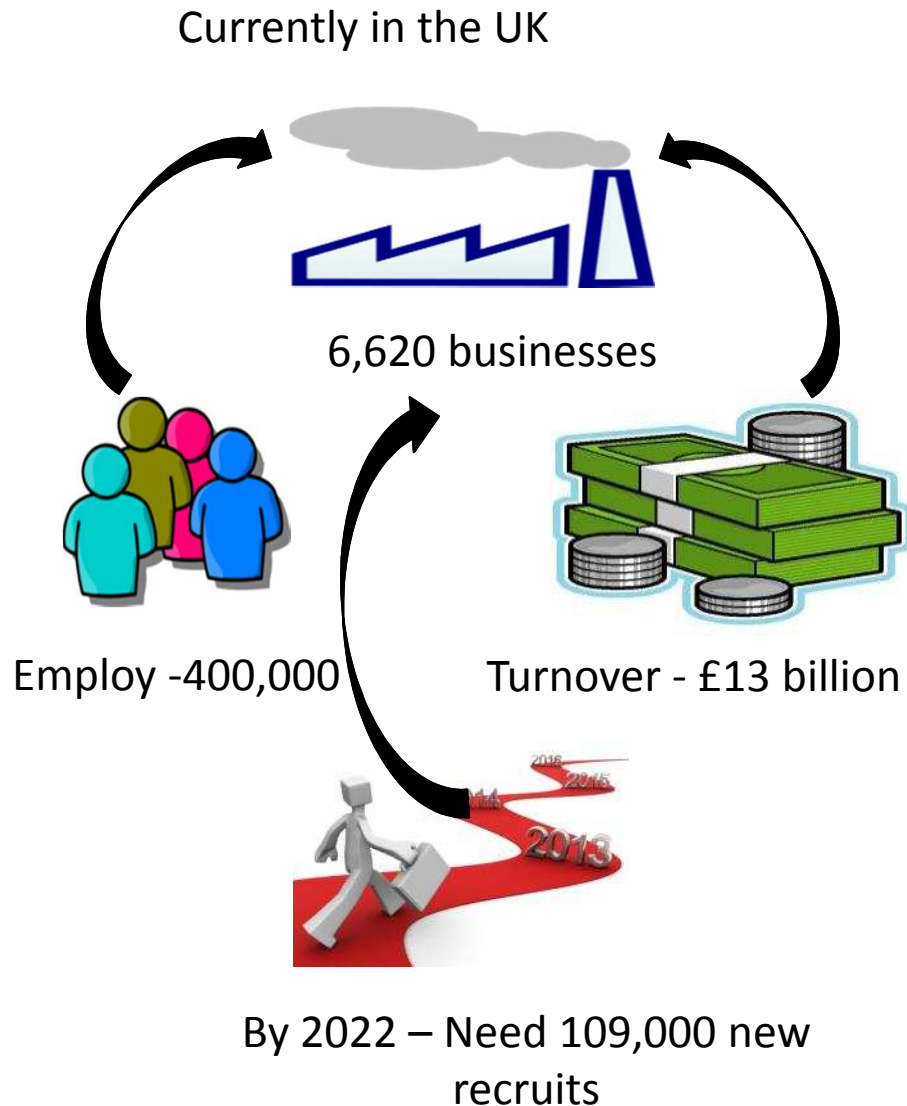
- **Definition of Eco-Intelligent Management of Food Supply Chain**
- **Why focus on Eco-Intelligent/Food Sustainability?**
- **Methods and Tools to achieve Eco-Intelligent Management**
- **Conclusions**

Definition: Eco-intelligent Management of FSC

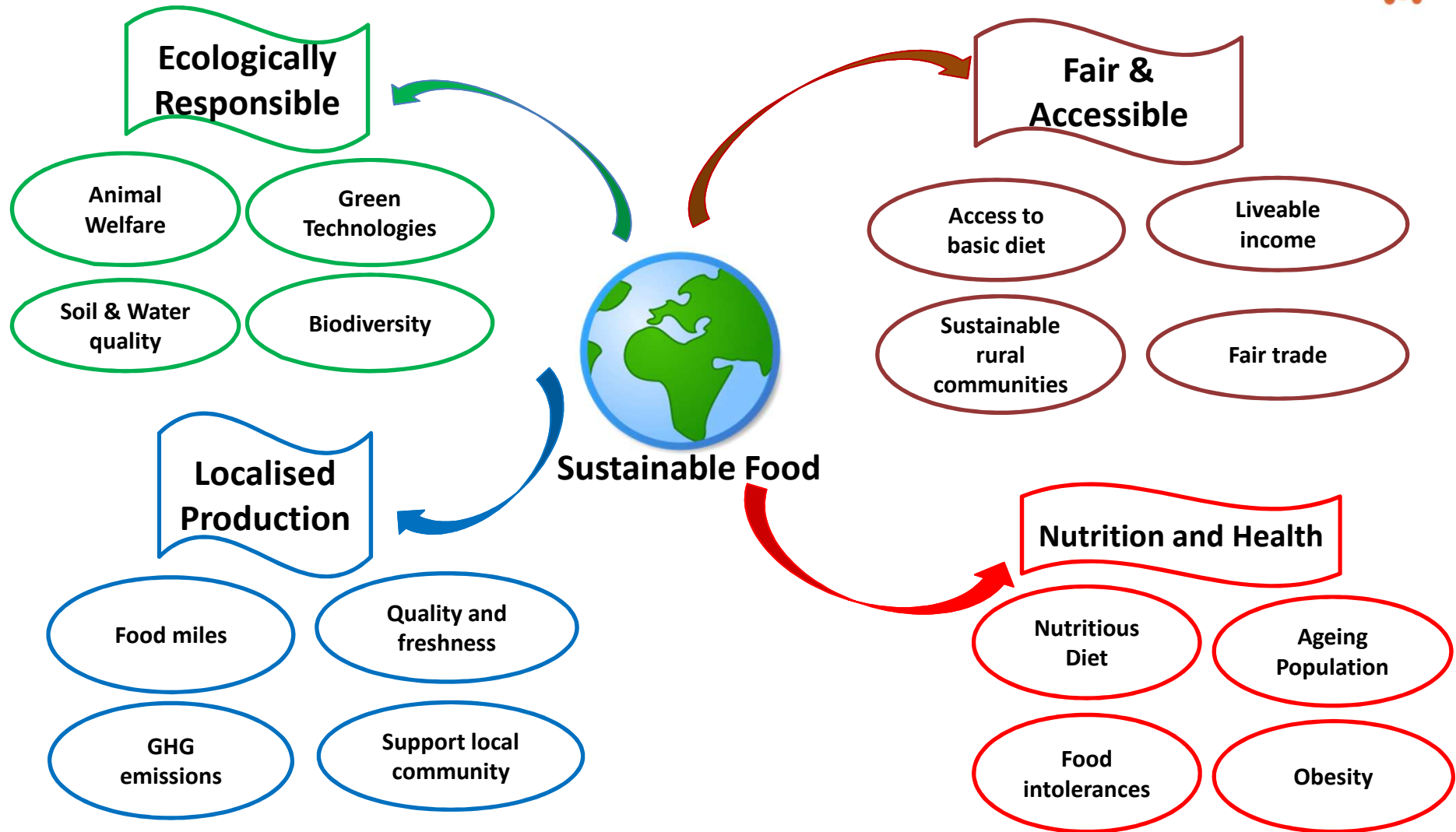
- Food Supply Chain which incorporates environmental considerations into Supply Chain decisions
- The objective is to achieve an “Environmentally Sustainable Food Supply Chain”.

Why Food Environmental Sustainability?

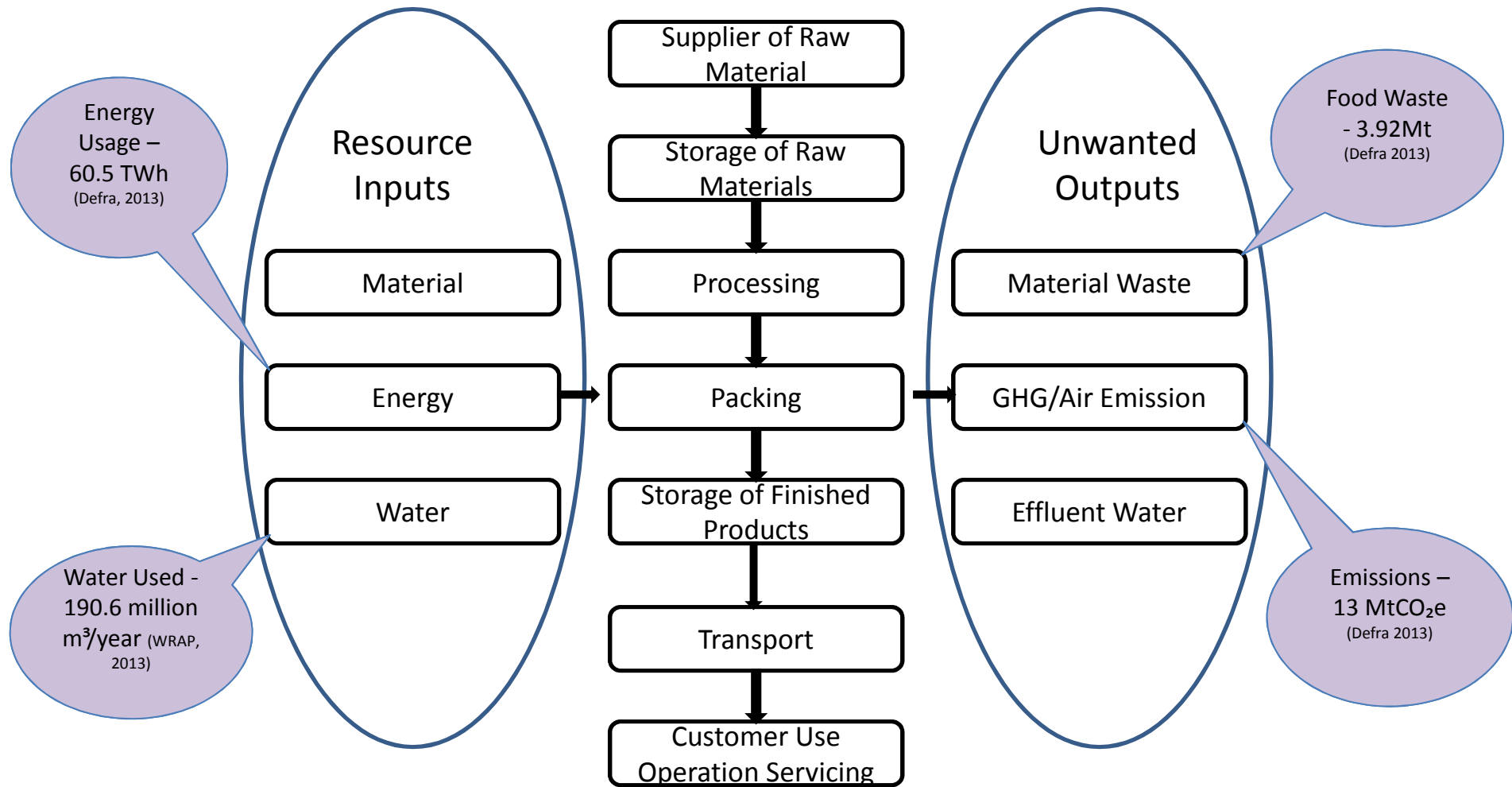
- World population - 9.6 billion in 2050
- 30% of food produced globally is wasted
- Climate change, global warming, ageing population, increasing demands on land availability
- Global Food and Drink - the largest manufacturing sector



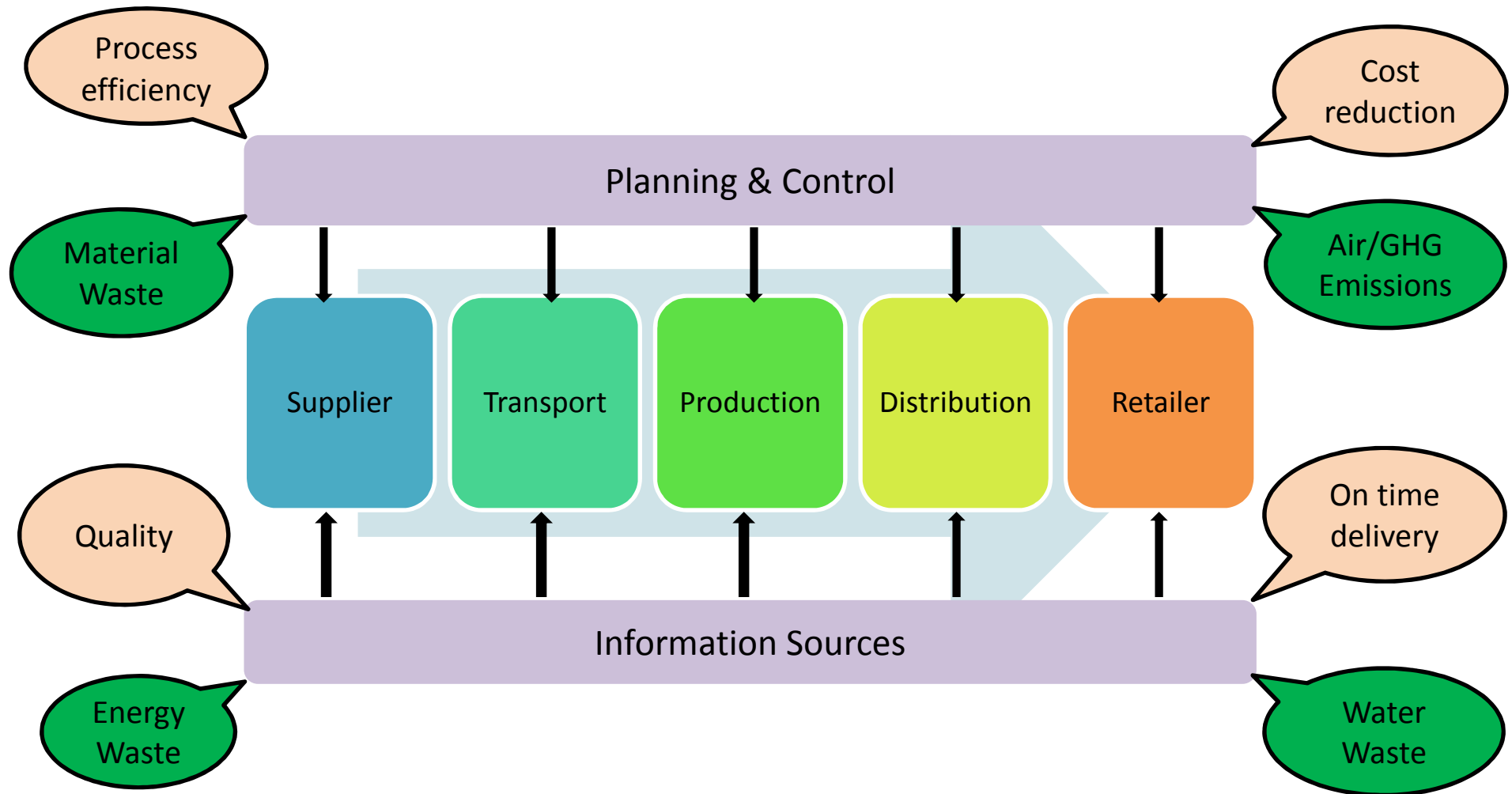
Food Sustainability - Various Perspectives



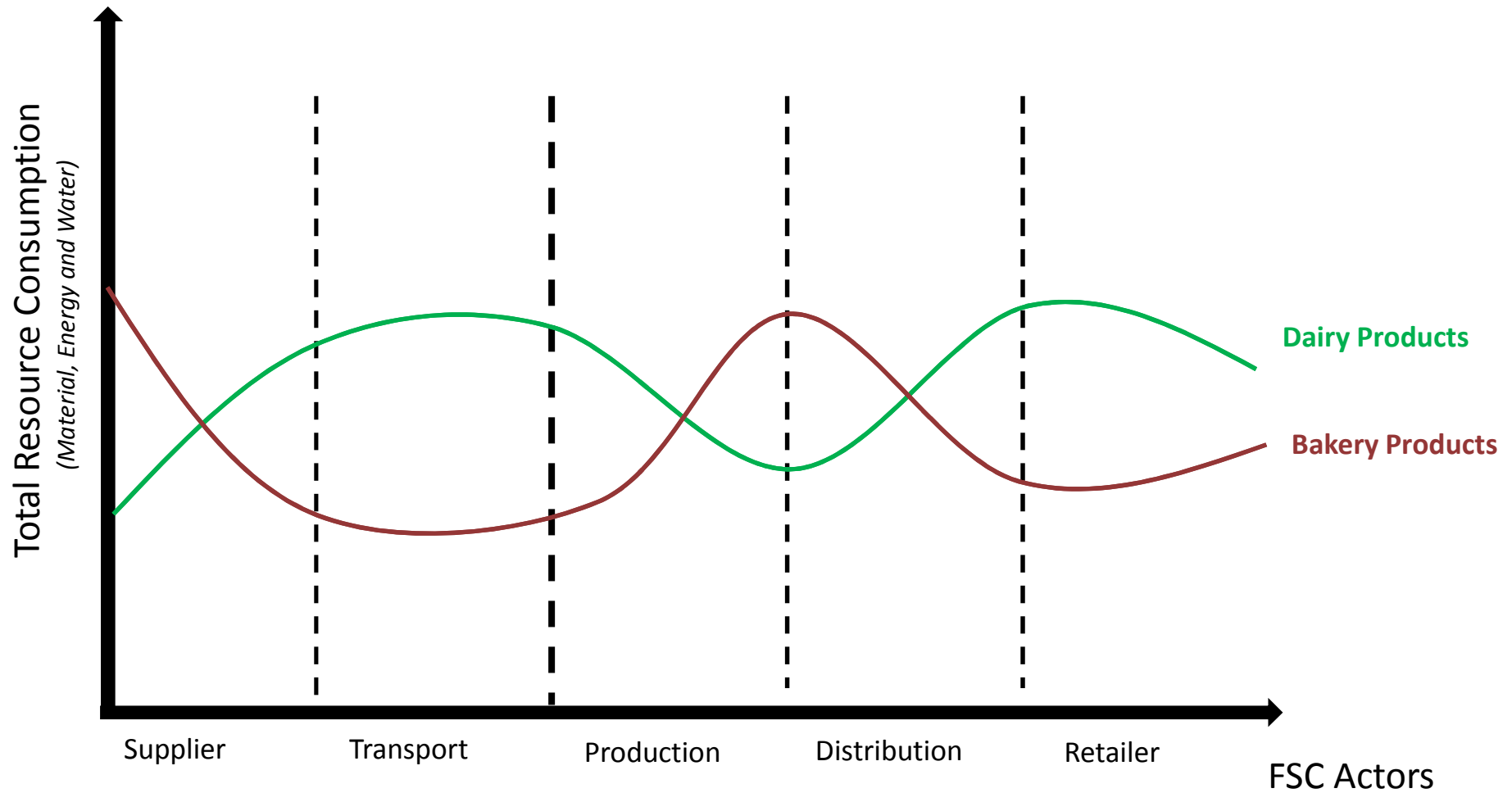
Input/Output Analysis of Food Supply Chain



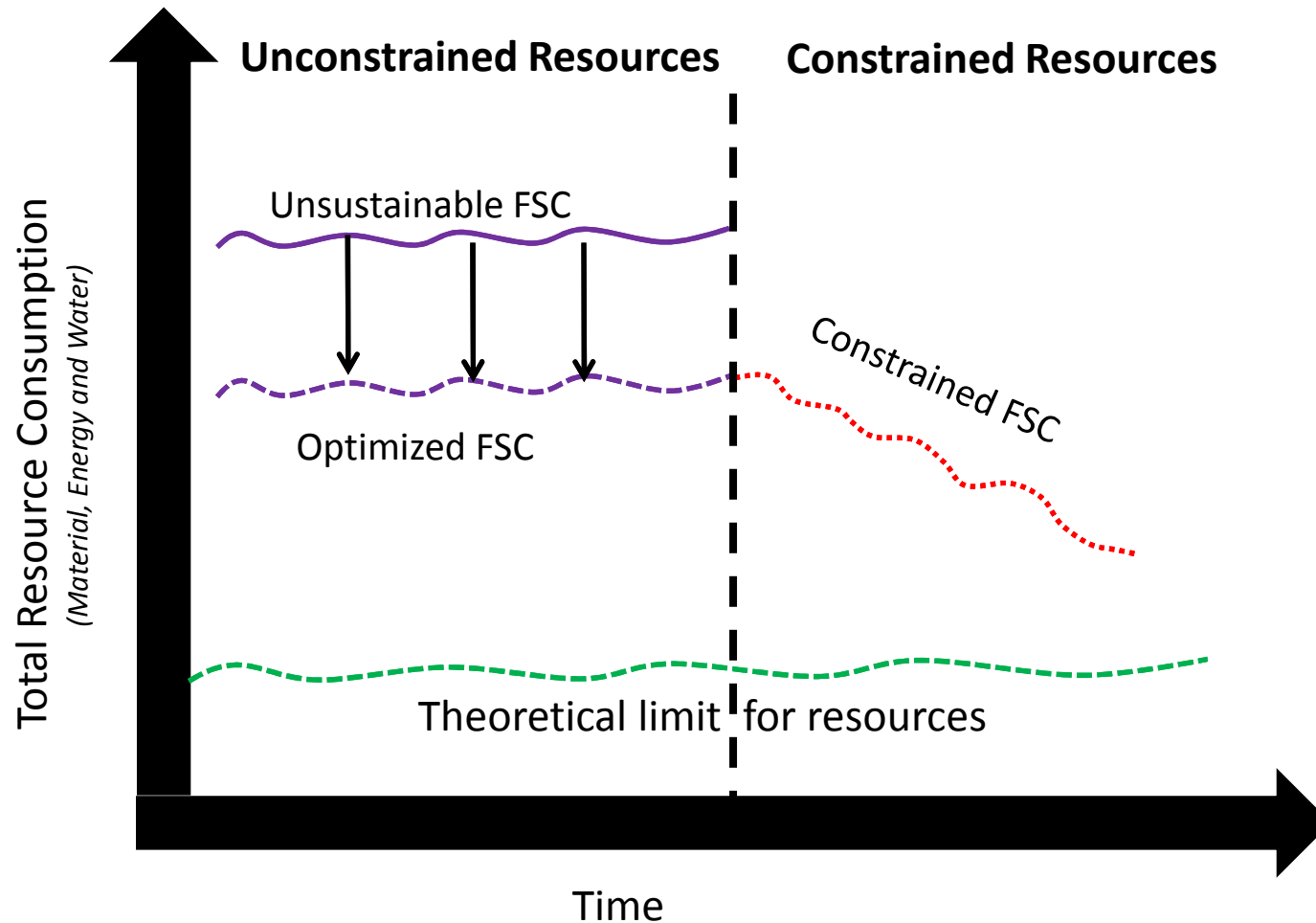
Current & Future Situation of FSC



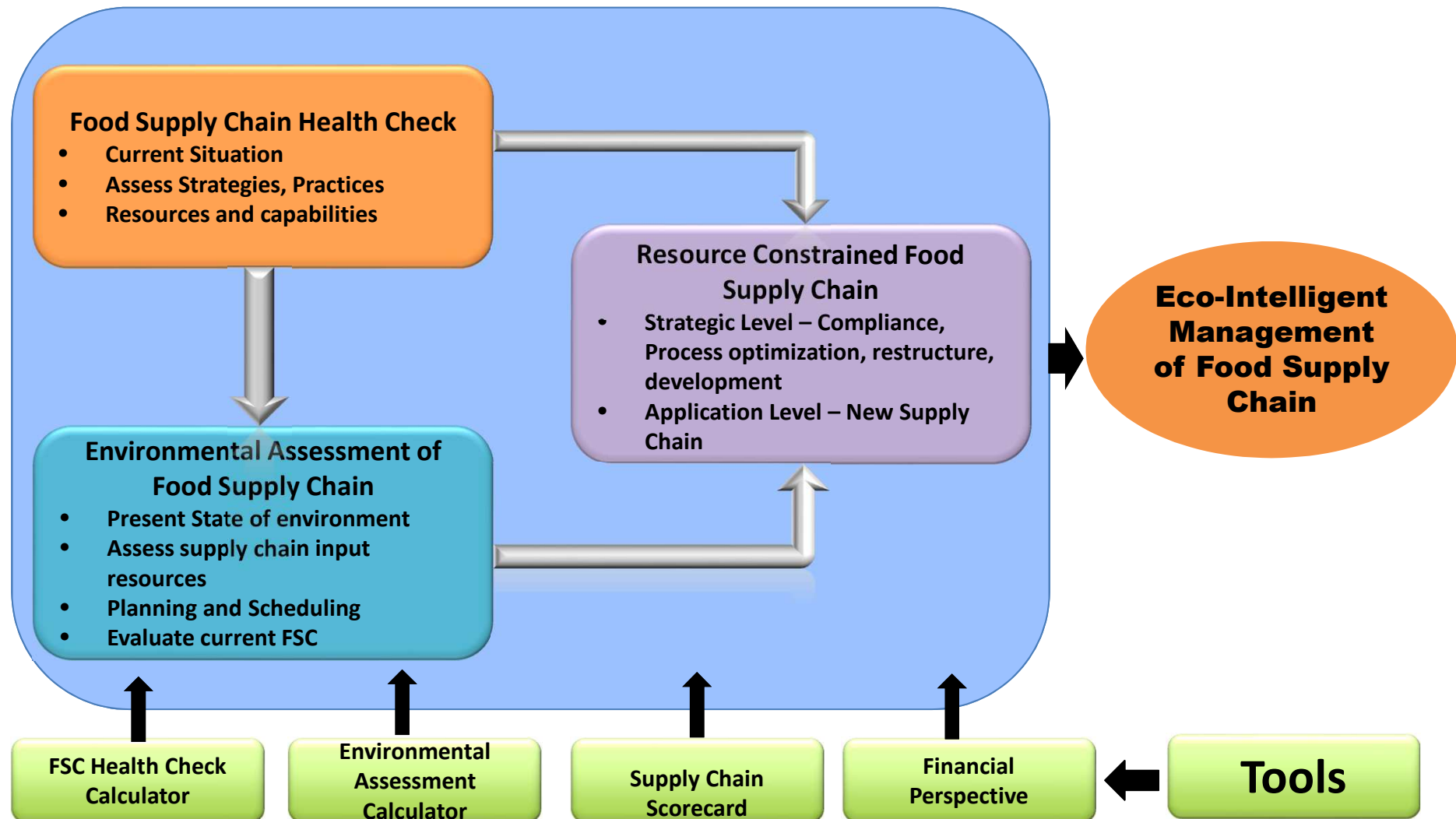
Challenge 1 for Eco-Intelligent Management of FSC



Challenge 2 for Eco-Intelligent Management of FSC



Methodology for Eco-Intelligent FSC



Tools for Eco-Intelligent FSC

(Working) Sustainability Calculator (AJ) 18.03.2016.xlsx - Microsoft Excel

Welcome to the **Eco-Intelligent Management Tools**

Supply Chain Calculator will help you to score your supply chain health with regards to consumption of Materials, Energy and Water.

Environmental Assessment Calculator will help you to calculate Materials, Energy and Water loss and its environmental impact in terms of cost to your company.

Supply Chain Health Calculator

Environmental Assessment Calculator

SMART
SUSTAINABLE MANUFACTURING & RECYCLING TECHNOLOGIES

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Benefits of Eco-Intelligent Management of FSC



Conclusion

- Eco-Intelligent Management of FSC can improve short-term manufacturing decisions related to environment sustainability.
- Production parameters & information support systems must be reconfigured to reduce impacts by successfully embedding environmental considerations into supply chain decision support tools.



**We need to have a ‘solution’
for environmental ‘pollution’
In the Food Sector**

Thank You!!!

References

- [1] Food and Drink Federation. (2016). *Statistics at a Glance*. Available: <https://www.fdf.org.uk/statsataglance.aspx>. Last accessed 11th Mar 2016
- [2] Global Reporting Initiative. (2008). *Sustainability Reporting in the Food Processing Sector*. Available: <https://www.globalreporting.org/resourcelibrary/Sustainability-Reporting-in-the-Food-Processing-Sector.pdf>. Last accessed 01st mar 2016.
- [3] Simmons, J & Ashworth, C. (2012). *Making safe, affordable and abundant food a global reality*. Available: http://www.agonthe4front.com/2012_11_01_archive.html. Last accessed 01st Mar 2016
- [4] UN News. (2013). *World population projected to reach 9.6 billion by 2050*. Available: <https://www.un.org/development/desa/en/news/population/un-report-world-population-projected-to-reach-9-6-billion-by-2050.html>. Last accessed 01st Mar 2016.