## Introduction and Overview

<table>
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<th>Trends</th>
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<th>Technology</th>
<th>Challenges</th>
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| Demand for food quality and safety | - Increase efficiency in production  
- Produce organic food  
- Produce & consume locally  
- Ensure traceability  
- Reduce environmental footprint  
- Reduce waste  
- Enable circular economy | - Precision Farming through IoT, drones / robots, satellite:  
  ✓ Data gathering  
  ✓ Data analysis  
  ✓ Decision making  
- Connectivity: NB-IoT, 5G, …  
- AI / Deep Learning tools  
- Block chain  
- Vertical agriculture  
- New materials | - Cost  
- Accuracy  
- Interoperability  
- Security in data management  
- Recycling  
- Services  
- Business model |

**Sustainable Farming**
The Agrifood (digital) Value chain

Benefits:

- Higher productivity
- Reduced environmental footprint
- Improved animal and farmer welfare
- Enhanced food traceability

Digital farming