Strategic Dialogue on the Future of EU Agriculture
Reflection on the policy implications from economic perspectives

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- Business economist, Erasmus University Rotterdam 1981
- 1981 – 2020 Economist and research manager at Wageningen Economic Research (and its predecessor LEI)
- Chief Policy Analyst Wageningen Economic Research
- Fellow and former Secretary-General of the EAAE and its publication foundation (ERAE, EuroChoices, Q Open)
- Several (policy) advisory councils and board memberships

Present:

- Rli – member Council for the Environment & Infrastructure
- Co-owner of a family arable farm.

The questions for the Dialogue

1. *How can our farmers, and the rural communities they live in, be given a better perspective, including a fair standard of living?*
2. *How can agriculture be supported within the boundaries of our planet and its ecosystem?*
3. *How can better use be made of the immense opportunities offered by knowledge and technological innovation?*
4. *How can a bright and thriving future for Europe's food system be promoted in a competitive world?*

How would an economist answer ? And what would be his/her reflection be on the answers by the Dialogue ?

Standard of Living: Markets and prices

- Food security and food safety are public concerns, but best organised via markets with independent farms as actors
  - (and not state farms or totally by community supported agriculture in which consumer cooperatives hire a farmer)
- In markets prices play an important role:
  - **Prices work as instruction for producers**: they are the signals for producers if more is needed (high price) or less (low price).
  - **Prices shape the future** as they direct innovation: innovators try to reduce inputs with high prices: robots replace expensive labour
  - **They reward producers** for their work, their costs. But only in the very long run of an equilibrium situation (mc=ac). In the short run (in agriculture easily meaning a decade) marginal cost and prices are lower than average cost
- This holds equally for product prices as for prices of labour, land, capital

An overwhelming majority of farmers (and food system actors) accepts a market-based approach but not always all its consequences.

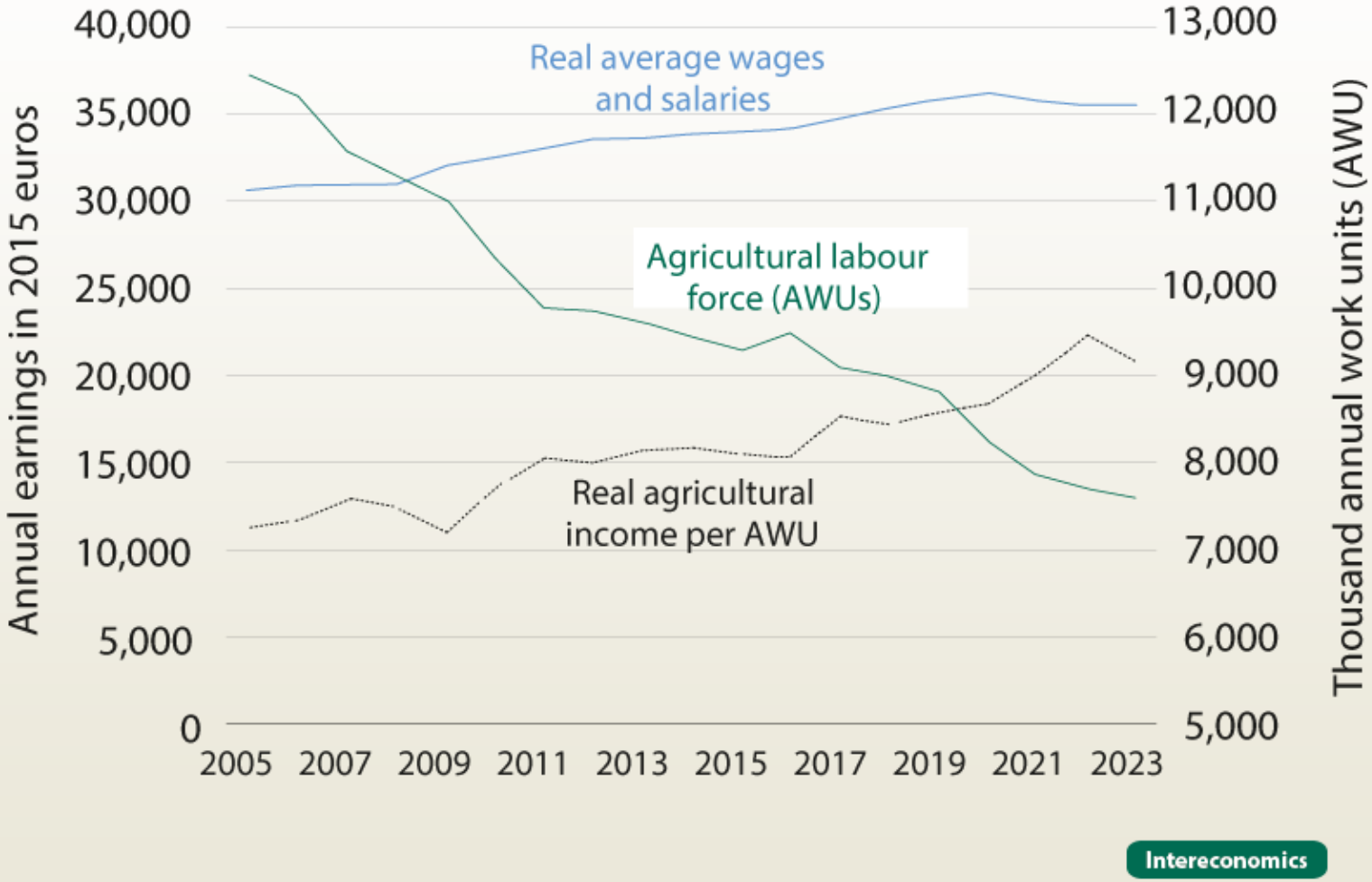
Structural change

- Last 75 years: large increase in income, Implies **higher labour costs**
- **Induces innovation** to increase labour productivity:
  - Mechanisation, use of chemicals, modern stables, robotisation.
- Is a drive towards (ever) lower food prices
- Leads to a **reduction in labour input**: less farm hands, many children that leave for the city, less farmers
  - As a method to keep farm income (for those who stay) in line with those in the rest of society
- **Adjustment by quitting takes decades** (tax reasons, transaction cost of moving to city, status: it is rational for farmers to stay until retirement at older age, not reinvest in last15 years and use cashflow as income)

Most farmers accept this, as long as it it goes rather 'natural' at a moment that the next generation votes with its feet.

Some regions see a much stronger decline in farming as they are outcompeted by others (business tends to concentrate e.g. in fertile regions, near ports etc.)

Real farm income versus wage income outside farming, EU, 2005-2023 (source: A. Matthews /Eurostat)



As structural change is slow, it is here to stay: the 'smallholder issue'

- Current number of specialised dairy farms in EU: 315,000
- Current number of cows per specialised dairy farm: 40

- Number of dairy cows currently on an average Danish farm: 230
- Number of specialised dairy farms "needed": 55,000
- Number of new entrants "needed" (2.5% per year) in equilibrium: 1,400

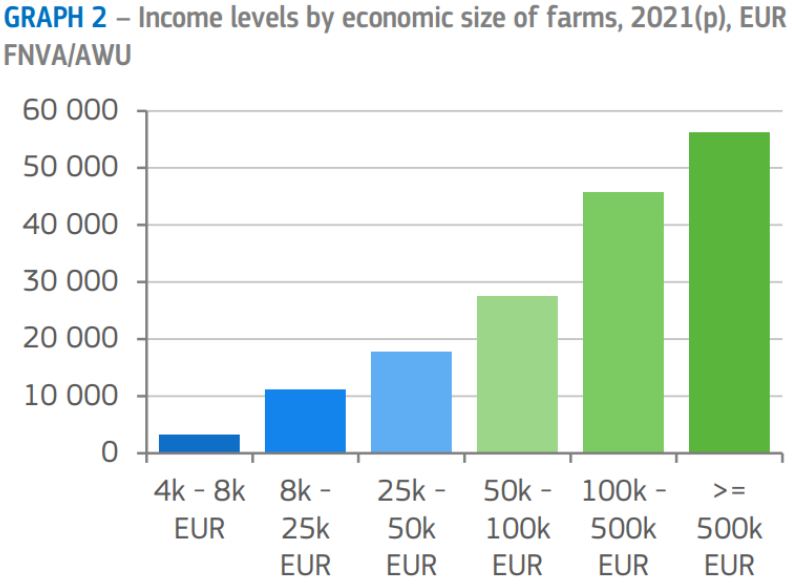
- 1/3 of dairy cows is on non-specialised farms, which makes the situation perhaps more problematic.
- This is probably an underestimation of things to come: optimal sized farms are already bigger than 230. And technology like milking robots is still improving, do future tractors still need a driver?
- *Speeding up structural change is seldom a political option (see Mansholt, 1971)*

Incomes

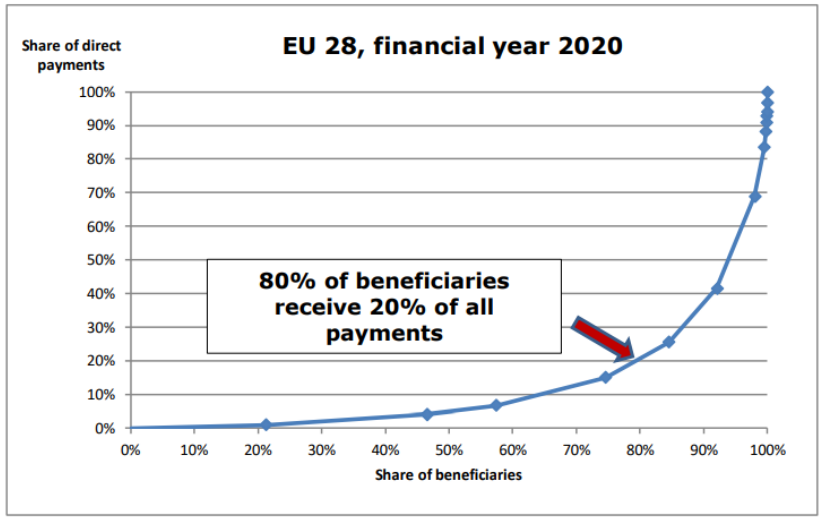
- **Structurally low incomes are a signal from the market** that labour can better be employed in other sectors.
- Without a social policy **a large percentage of farmers is for a long time below the poverty line** (sometimes with wealth from farm assets, sometimes with big bank loans). And solidarity between regions is part of the European project
- Distribution of income is large, also among comparable farms in the same farm type.
- Partly explained by farm size (in general larger farmers have a higher value added, although more is paid to banks) but also large differences in competences.
- **It is hard to increase farm size** and to improve economies of scale as extra land for all is not available (even the Dutch stopped making extra land).

Importance of AKIS (agricultural knowledge and innovation system) and feed back with economic/financial data (benchmarking)

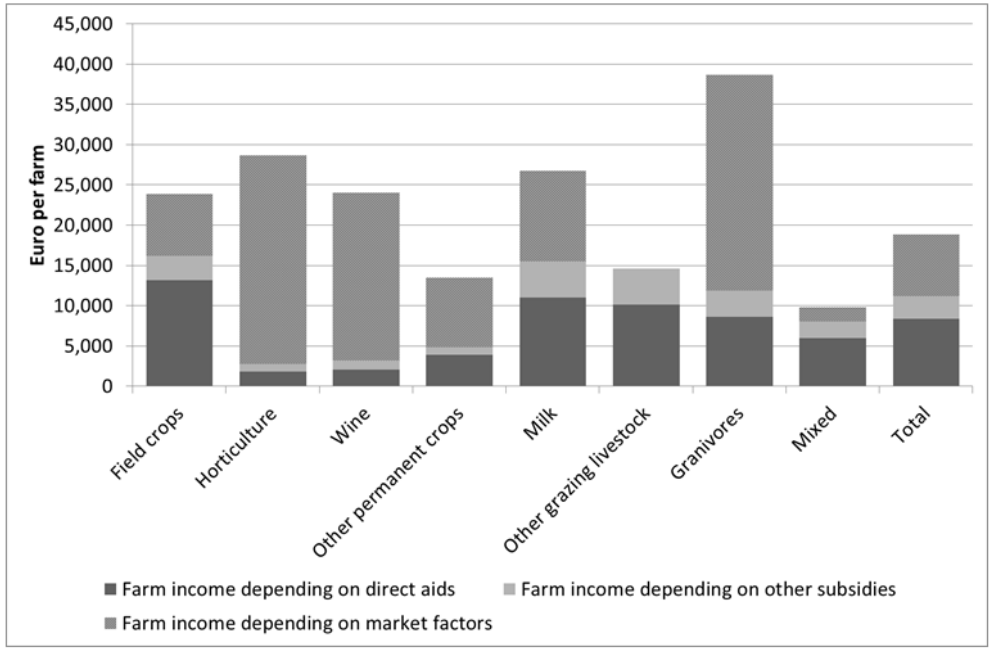
Economies of scale



Distribution of direct payments among beneficiaries



Importance of direct payments differs greatly across farm systems, 2011-2013



Source: Own compilation based on FADN data
Note that market income on 'other grazing' farms is slightly negative but the graph has been truncated at 0 for legibility purposes

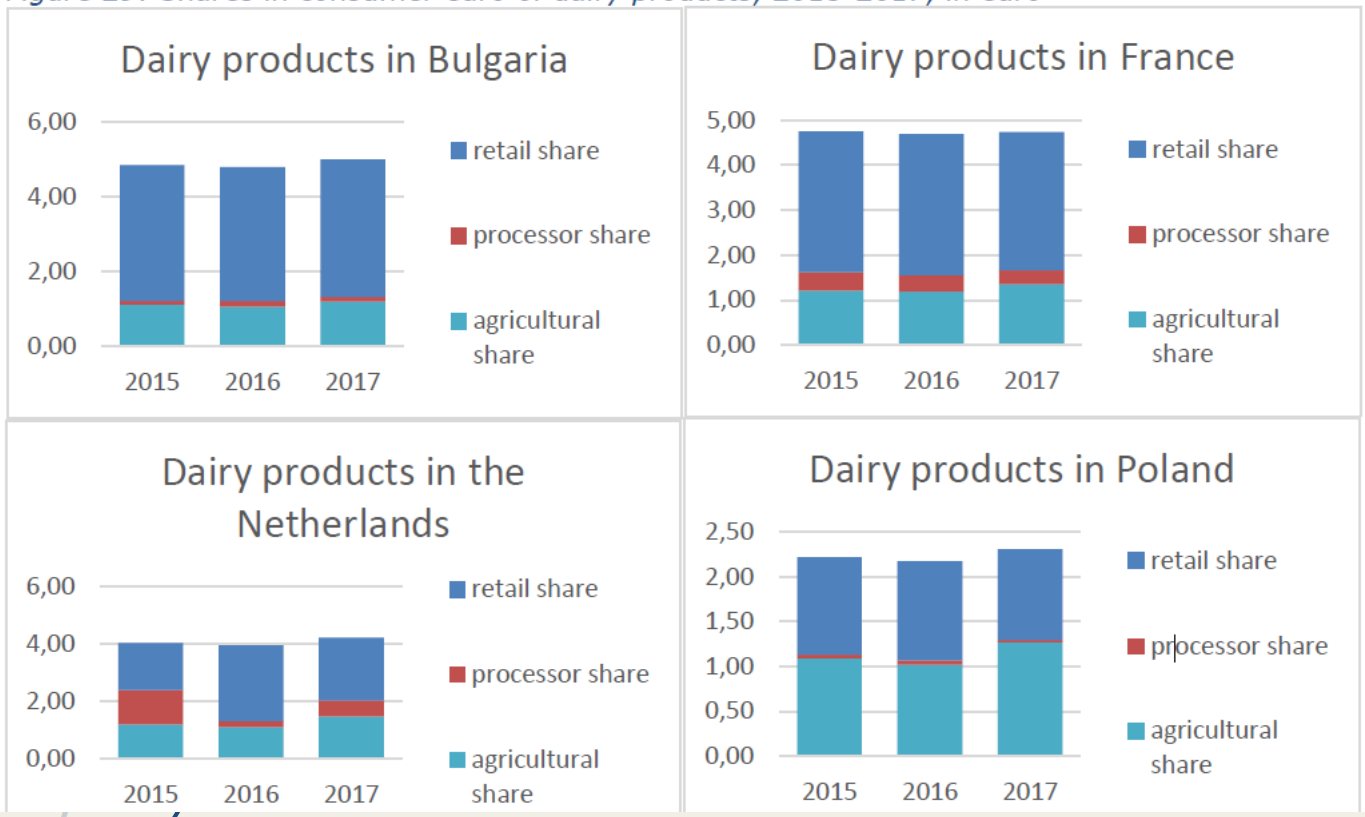
- Source: A. Matthews, EU CAP Reform blog, based on FADN

Source: DG Agri

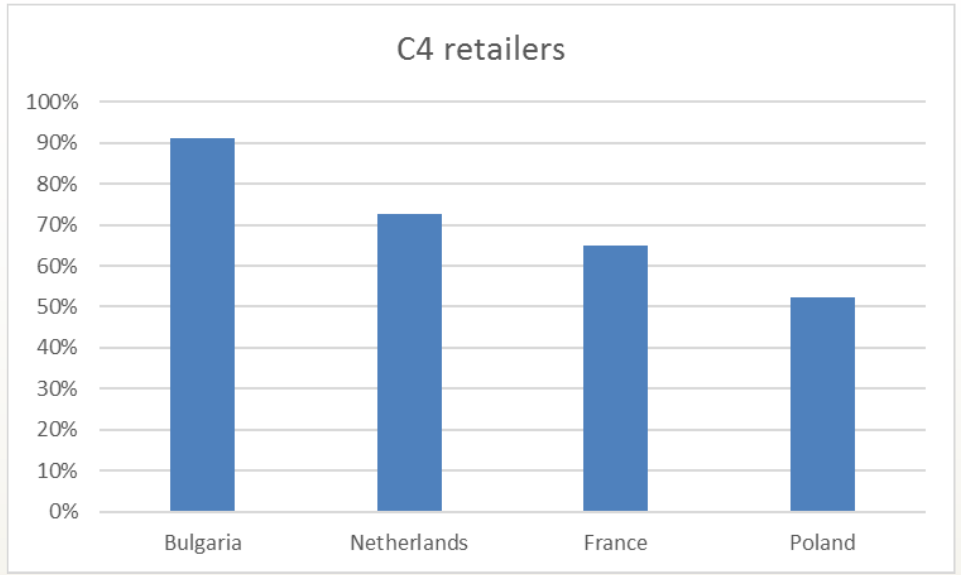
Margins in the food chain

- Last 75 years structural change (increase in scale) has been faster in retail and food industry than in farming (out went the classical mom&dad grocery store)
- There is a **power imbalance**, leads **sometimes to unfair trading practices** (late payments, unclear contracts etc.) Legislation improves the situation
- **Farm gate price is often a small(er) part of the consumer price**, Food banks and hunger in 3rd countries are an income problem, not a price problem.
- Margins are higher in input industry, food companies and retail. Has partly **to do with the slow structural adjustment in farming**, partly with property rights (IPR on brands, IPR an technology).
- **Cooperatives / producer organisations are the classical countervailing power** – but several are now multinationals that struggle with the cooperative spirit / member involvement
- **Increasingly, food chains are not organised as open markets** like in auctions (based on price only), but on contract farming - to manage other aspects of the transaction (timing, differentiation in variety, packaging, realible sourcing, etc.)
- This provides regulators with opportunities to address food companies: CSRD-Scope 3, Sustainable Finance Act.

Figure 29: Shares in consumer euro of dairy products, 2015-2017, in euro



Combined market shares of largest four food retailers, 2017, in %



Baltussen, W., et al., *Monitoring of Prices and Margins in EU Food Supply Chains: Existing and Alternative Approaches*, Publications Office of the EU, 2019

Margins in Dutch dairy sector, 3 or 5 years averages centred on 2003, excluding Unilever, farm costs including wage remuneration family labour.

	Profit margin	Return total capital	Solvabililty	Return own capital
Feed	2.8%	7.7%	48,9%	14,3%
Farming	-9%	1,5%	74,6%	0,5%
Dairy processor	2.3%	7,1%	22,4%	2,3%
Retail	1,2%	7,1%	19,3%	1,2%

Source: G. Backus et al, Ketenrendementen in de Nederlandse agribusiness, LEI Den Haag, 2007

CAP History and new challenges

- Protective high prices (to create level playing field in EU), food importer
- Surplus in butter mountains and wine lakes, food exporter
- World market prices, (tradable) quota. Direct payments as compensation
- **Has become less effective: direct payments are now reflected in higher land prices and suboptimal structure** (it is possible for some smaller farms to have a successor due to the direct payments in income).
- Decentralisation with national plans in current period to adjust to local ecological challenges

New Challenges:

- **Need for climate adaptation, - mitigation and saving biodiversity**
- **Sourcing problems for industry (climate risk) ? Effects bio-economy ?**
- **Preparing for Ukraine, perhaps not in 2027 but are we ready in 2032 ?**
- **Demographics: Labour shortages in the rest of the economy**

Reflection on the Dialogue's outcome

- Position in the food chain is the first topic mentioned with the standard view: *"by encouraging them to better cooperate, reduce costs, increase efciency, and improve prices and decent income from the market"*
- Issue of distribution of CAP payments and need to change payments to small farmers is recognised *"the future CAP should focus on these central objectives: (1) providing socio-economic support targeted to the farmers who need it most; (2) promoting positive environmental, social, and animal welfare outcomes for society; and (3) invigorating enabling conditions for rural areas."*

- **Next step: Translate in CAP post 2027.**

The questions for the Dialogue

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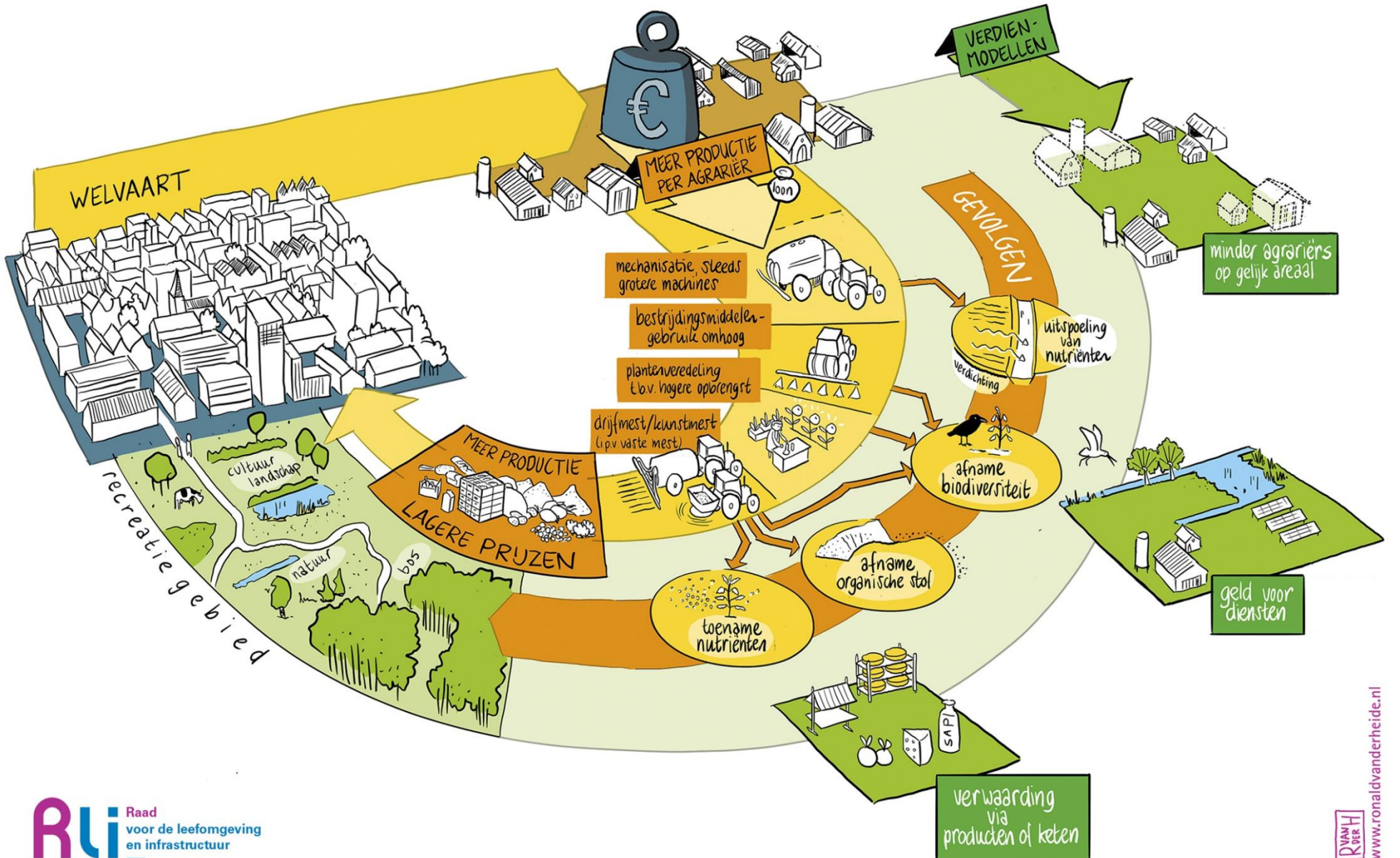
Production process has negative (and positive) externalities



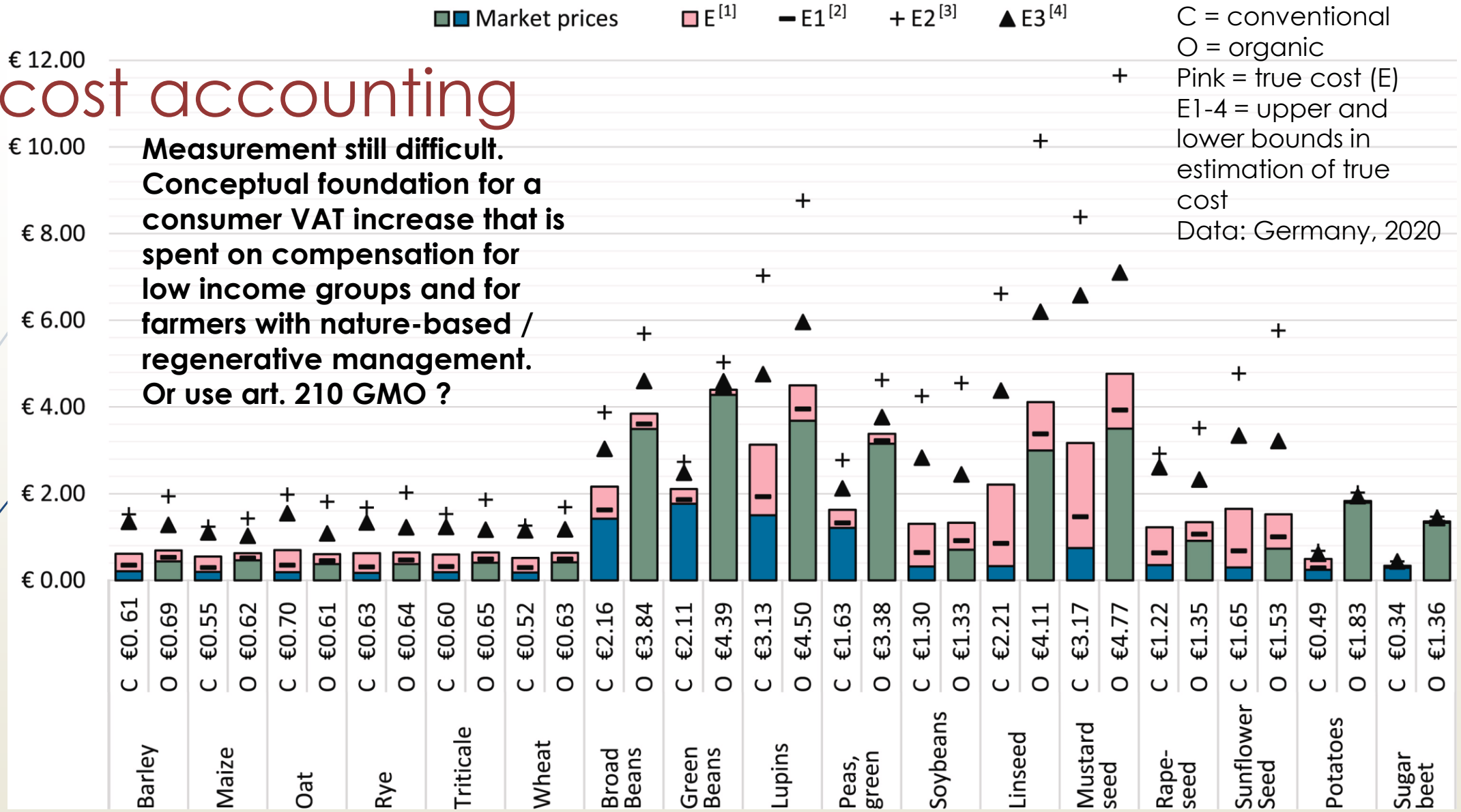
Raad voor de leefomgeving en infrastructuur

Externalities are not a part of prices and do not influence the decision making by actors

- Externalities are **inherent in (open air) farming**
- Technical innovation and benchmarking has led to **a large reduction** in pollution from farming
- **Pollution is also an effect of concentration** in certain regions and incentive to produce very intensively as extra land is not available With immigrant labour. And on the edge of animal welfare legislation to manage costs.
- Farm costs do not show the True Cost, hence there is no True Price
- New challenges due to climate adaptation, - mitigation, biodiversity
- Product-differentiation (labelling and branding) contributes but most consumers are price-sensitive.
- **Regulation** is often preferred in environmental policy (as in food safety) but **speeds up structural change**: investments needed and agricultural morkets incorporate slowly (low elasticities).

True cost accounting

Measurement still difficult. Conceptual foundation for a consumer VAT increase that is spent on compensation for low income groups and for farmers with nature-based / regenerative management. Or use art. 210 GMO ?



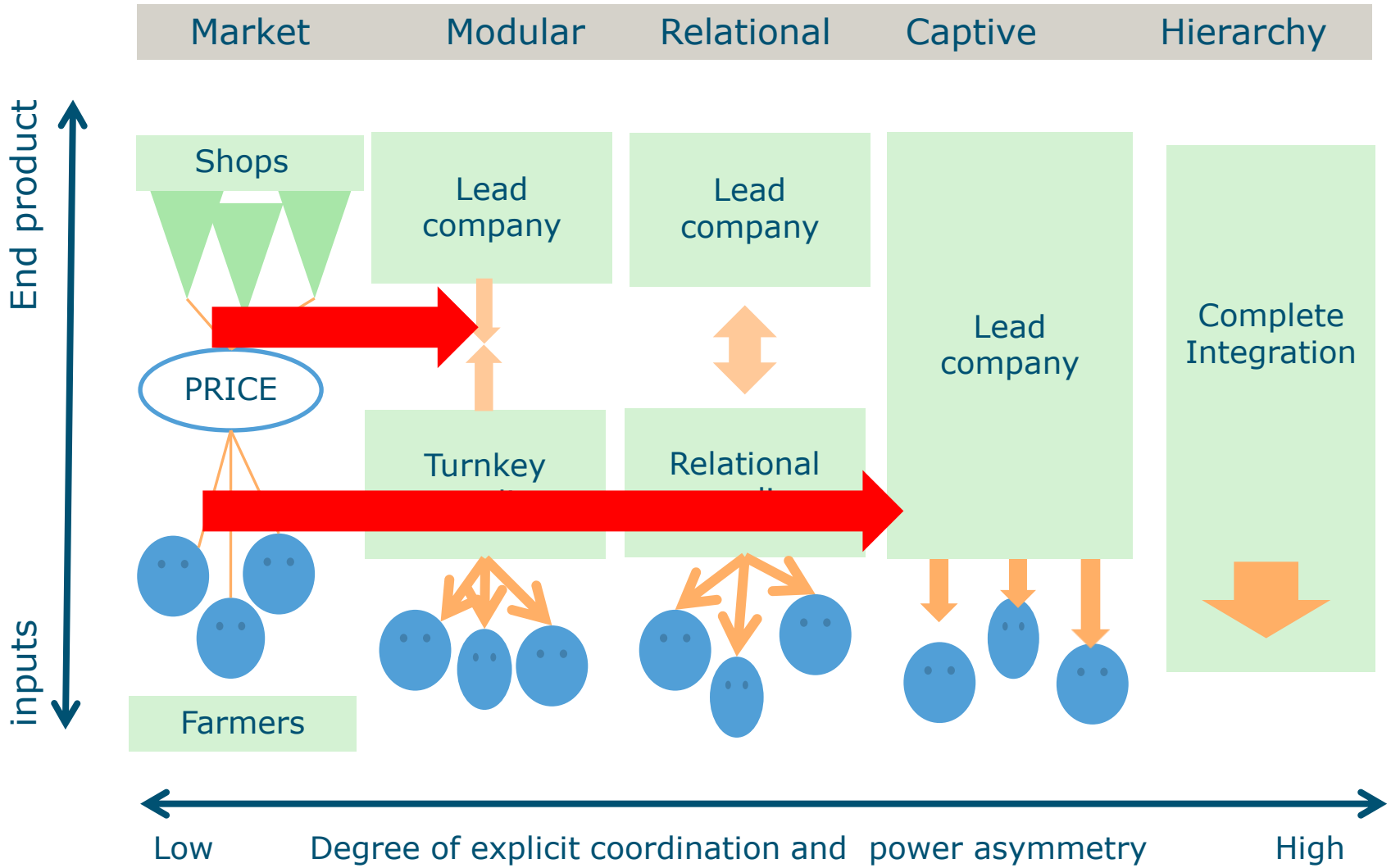
C = conventional
O = organic
Pink = true cost (E)
E1-4 = upper and lower bounds in estimation of true cost
Data: Germany, 2020

Farming vs. Cars: regulation works differently

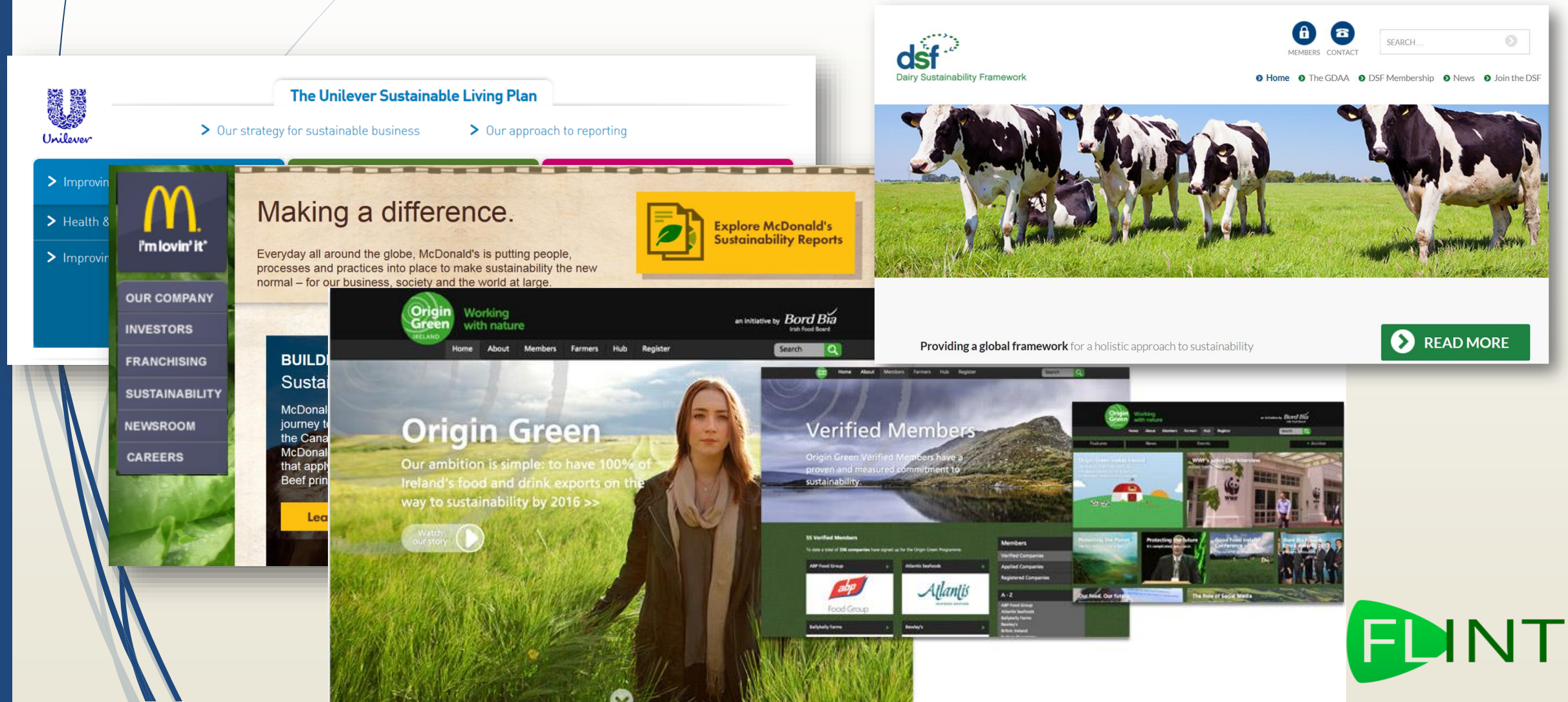
- Regulation (e.g. safety belts, more efficient motor) increases costs car factory. Announced years ahead.
- All factories increase their listed price
- They sell a bit less cars (and a temporary oversupply depresses prices and profits)
- They reduce cost by employing less personnel, perhaps some mergers
- The market has absorbed the regulation in rather short time (e.g. 1 year).

- Regulation (e.g. for water directive) increases costs farmers
- In case of extensification: extra land is expensive due to suboptimal farm size, only best 10% can buy
- Farmers do not send invoices: no effects in prices, due to supply and demand.
- Farmers take the cost as reduced profit / income
- Prices rise (incorporate cost of regulation) once some production is reduced and farmers have quit (and others increased size)
- Such structural change takes a long time, the decision to leave is linked to the next generation
- Farmers are price-takers that focus on cost reduction and de-risking

Chain organisation changes (©Gereffi et al., 2005)



What can we learn from industry? (GlobalGAP, Private sustainability labels (On the way to planet proof, Tierwohl, etc.), Organics, CSRD-scope 3, Sust. Finance Taxonomy): result-based approaches seem to work better



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SUGGESTIONS FOR RESULT-BASED CAP

- Farming is market based. **Problems are only solved if you bring them in the economic system.**
- Market can be created for carbon (positive and negative), emission rights to manage externalities, ETS-like.
- The same for **emission rights** of nitrate, phosphate or ammonia emission in regions where such pollution has to be cut. It induces innovation and solves the coordination process that some farmers can cheaper adapt than others. Same for water (use) rights.
- **Result-based Key Performance Indicators** can be used (10 KPI like pesticide use/ha,, mineral balances, water use/ha, CO2-eq. emissions/kg etc) in Farm Sustainability Data Network and in AKIS and eco-schemes in stead of direct instructions to farmers or emission rights.
- **Certification and auditing** (like in organics) based on digitalisation of invoices can help to adapt to local circumstances and reduce administrative burdens.

Reflection on the Dialogue's outcome

- Sustainability objectives recognized. Food system approach advocated
- *Making the healthy and sustainable choice the easy one*
- Benchmark system a big step forward in measuring sustainability, social innovation by learning, incentivizing sustainable farms, prevent greenwashing
- *set a GHG emissions accounting system and specifed goals for the different types of agriculture*. Role of ETS in addition to benchmark system to be discussed.
- FSDN as innovator and provider of benchmark data
- Livestock industry of special concern, *In areas of high concentration of livestock, long-term solutions need to be locally developed and funded using the Agri-food Just Transition Fund.*. Text a bit ambiguous?
- EBAF: good for coordination between business schemes and public schemes, good for information flow to the Brussels' bubble. Should not replace democratic discussions in Parliament.
- **Next step: Create system. Translate in CAP post 2027 via National Plans. Basis for eco-schemes in Pillar 1?**

3. How can better use be made of the immense opportunities offered by knowledge and technological innovation?

- The innovation capacity of farming and the food system is high. It has to be redirected from ever lower food prices to current and future challenges.
- Technological innovation: new techniques: ICT, genetics
- Sustainable intensification, threadmill continues, small is seldom beautiful (but it is in biodiversity conservation)
- Need for social innovation, AKIS but also to reduce unsustainable demand (food waste, protein shift)
- Innovation mechanism works if sustainability issues are brought into the economic decision making (pricing….)

Reflection on the Dialogue's outcome

- More funding requested
- More practice oriented innovation, public-private co-innovation
- High quality advisory services, access by small farmers
- Generational renewal and gender issues stressed as important.
- Focus on digitalisation and new genomic techniques. Still different opinions.
- No silver bullet for all issues

- **Next step: CAP Post 2027 (AKIS) and Horizon programme ?**

4, How can a bright and thriving future for Europe's food system be promoted in a competitive world?

- Food System approach: work together (and address food companies in addition to farmers?)
- Certification is a tool for a level playing field vis-à-vis the Rest of the World (like in organic, food safety). CBAM for CO2
- EU is a net-exporter (and net-importer of minerals). Africa does not need our food products but our technology and a better local agricultural policy. Strategic independence is in micro-chips, amino acids for feed, phosphate etc. and not in soya.

Reflection on the Dialogue's outcome

- Promote EU's leadership role in product quality, culinary heritage, and sustainability
- Higher energy cost in EU is a risk
- Many views on global trade. importance of a global level playing feld and demand more action to ensure the equivalent standards for agri-food imports,

- **Next step: CBAM, Trade agreements, extend benchmark system with certification (like in organic or food safety).**

Implications for life science universities

- Dialogue is needed, use your convening power as an actor with academic freedom
- Direct research and innovation towards the future challenges
- Bring your staff into multi-disciplinary collaboration:
  - Engineers and natural scientist are good in creating new artifacts, but much less in designing policies and institutional arrangements in food chains
  - Social scientist are good in evaluating policies, much less in designing them
  - Together they can be stronger in designing technical plus social innovation.

Thanks for your attention

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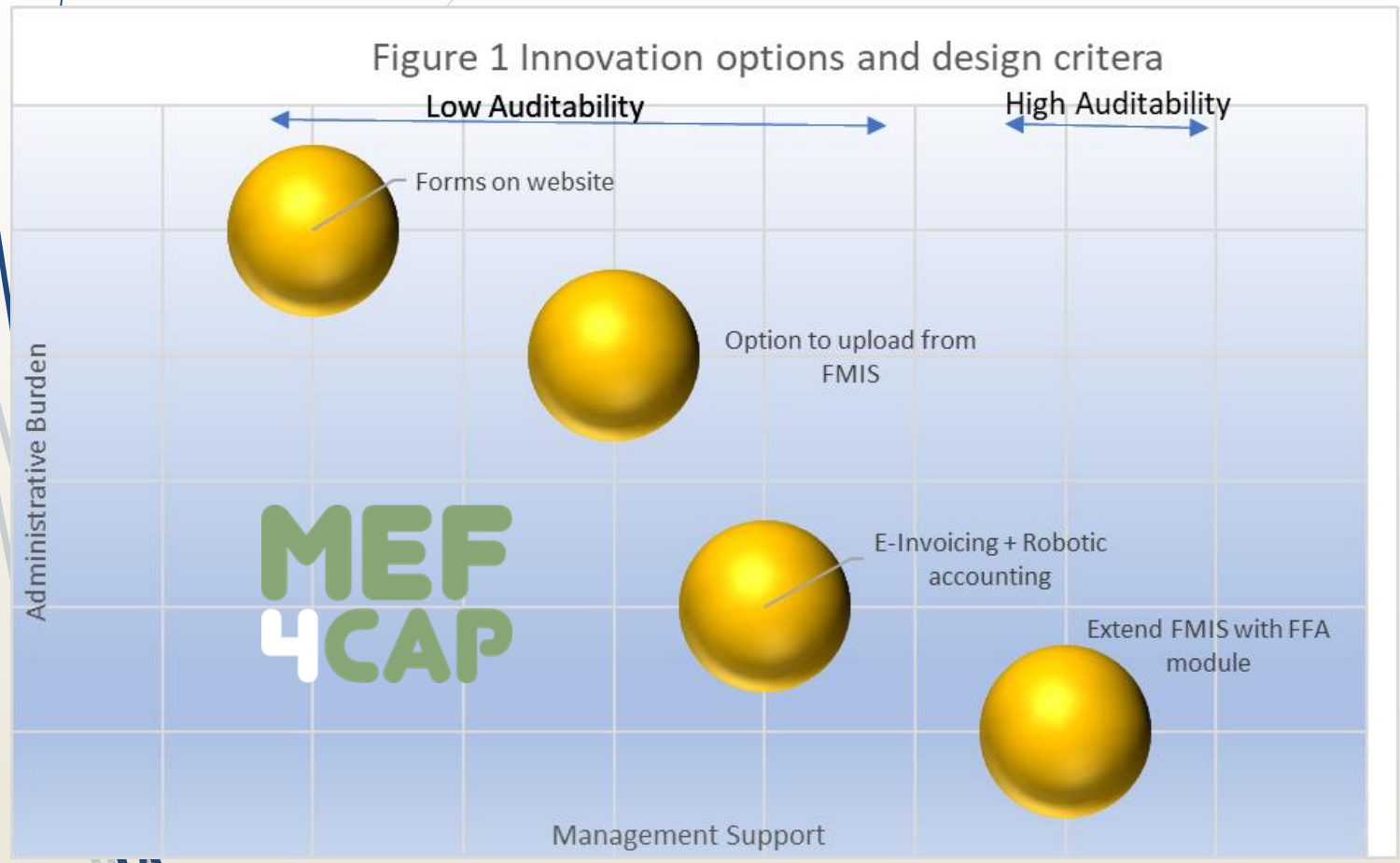
EEAC Advise on Sustainable Food Systems:
https://eeac.eu/wp-content/uploads/2022/10/Towards-a-sustainable-food-system-_-An-EEAC-Network-Position-Paper-PV.pdf

KPI and certification in CAP-post 2027

- Start measuring and reporting ecological sustainability at farm level (as we did in the past with economic sustainability)
- Definition of 10 KPI between now and 2027 (in FSDN ?)
- National plans 2027-2032: national/regional governments define:
  - * minimum levels on KPIs for conditionality, eco-schemes A/B/C, or Eco-scores A/B/C per region (soil type, water catchment area) – and add KPIs if necessary in the region
  - (preferably with a scoring system in which trade-offs between KPI can be handled, see the current Dutch system for eco-schemes)
  - Each region should aim for e.g. 20% farms with score A, 20% in E. In future: larger regions.
- The certification methodology as currently in use for organic farms is extended to all farms (> € 25,000,- sales) and the certification includes all other (national) public farm regulation (like the French Duerp on risks of labour etc).
- Audits can combine public and private audits in a one-stop-audit
- Farmers have to send in their audit result (eco-score and non-conformities) to the paying agency
- [a framework law on sustainable food systems could regulate food industry on e-invoicing, on using the public certification as basis in private top-up schemes or oblige blending]

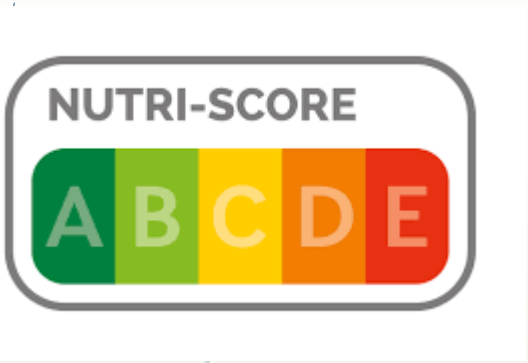
Administrative burden ? ICT !



- **Many indicators can be calculated from (VAT) accounts, e-invoicing** and Farm Managemen Information Systems.
- ICT can solve a lot (already of current administrative burden): e-invoicing directive
- Small farms (less than € 25,000 sales) could be exempted: CAP payment is unconditional income support ?

Poppe, Krijn, Hans Vrolijk and Ivor Bosloper (2023) Integration of Farm Financial Accounting and Farm Management Information Systems for Better Sustainability Reporting in: Electronics, 12, 1485. https://doi.org/10.3390/electronics12061485

Extensions based on certification



Start measuring and monitoring: Based on their certification and audit results farms can be classified on their level of sustainability, a sustainability or eco-score for the farm (and its products) like the Nutri-score.

This makes it easier:

- In CAP Pillar 2 to provide assistance to farms to move up from label D (or bronze, or orange) to label B or A - with innovation support, AKIS etc.
- For food processors, banks and land owners to report in CSRD or to differentiate trade conditions (e.g. interest rates) between more and less sustainable farms
- A Framework Law on Sustainable Food Systems could oblige dairy factories and slaughterhouse to buy 25% from farms with the highest sustainability score (A / dark green) and pay a premium that reflects the farms' extra cost (blending as in petrol). That would solve the issue that we force farmers to become more sustainable without paying these price-takers.