

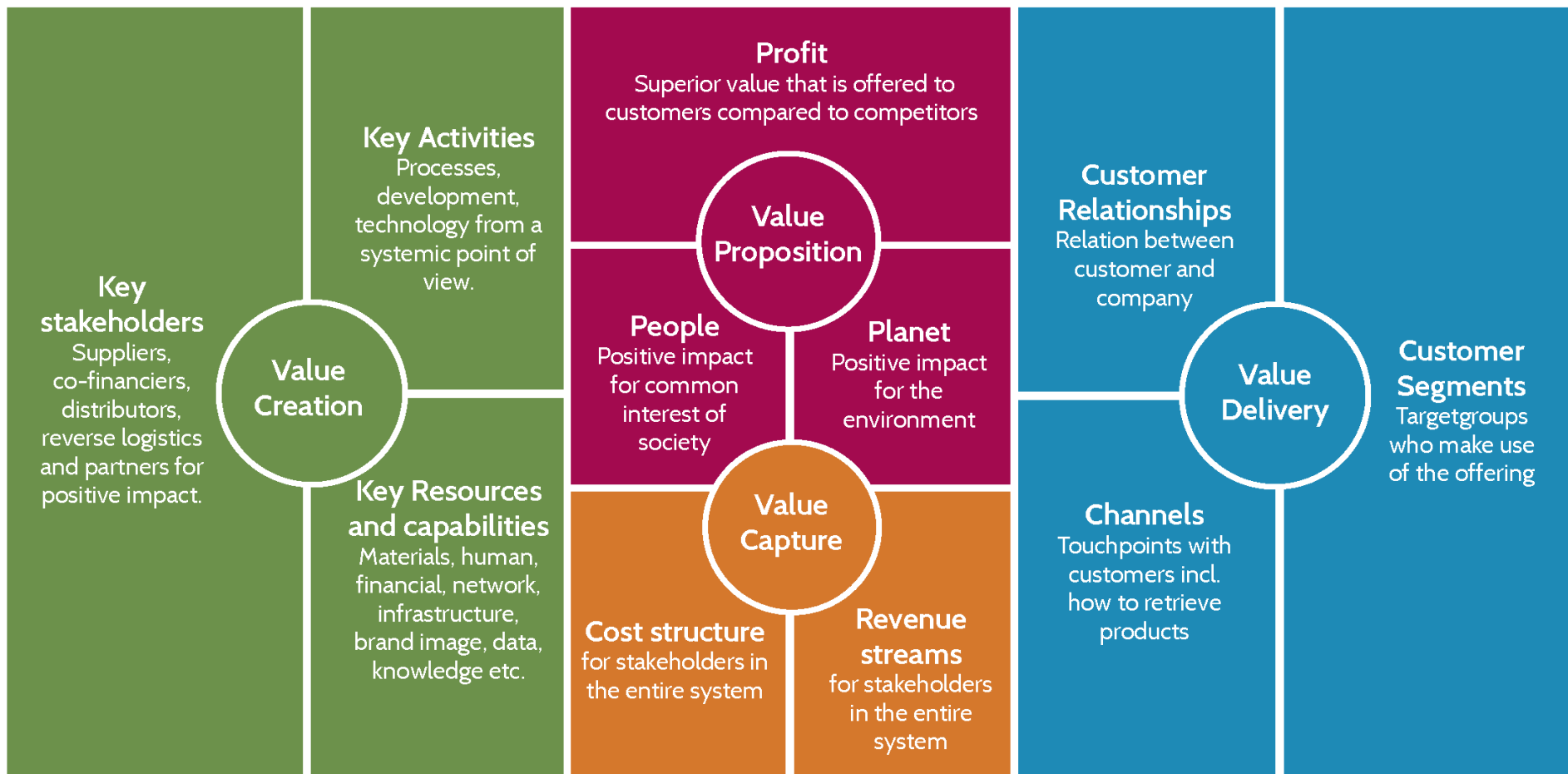


Sustainable business model innovation – what's next?

Disclosure for the Green, Inclusive & Open Economy – Blueprinting
the Future

Nancy Bocken, Amsterdam, 31 May 2017

Sustainable business models: *Value delivery*

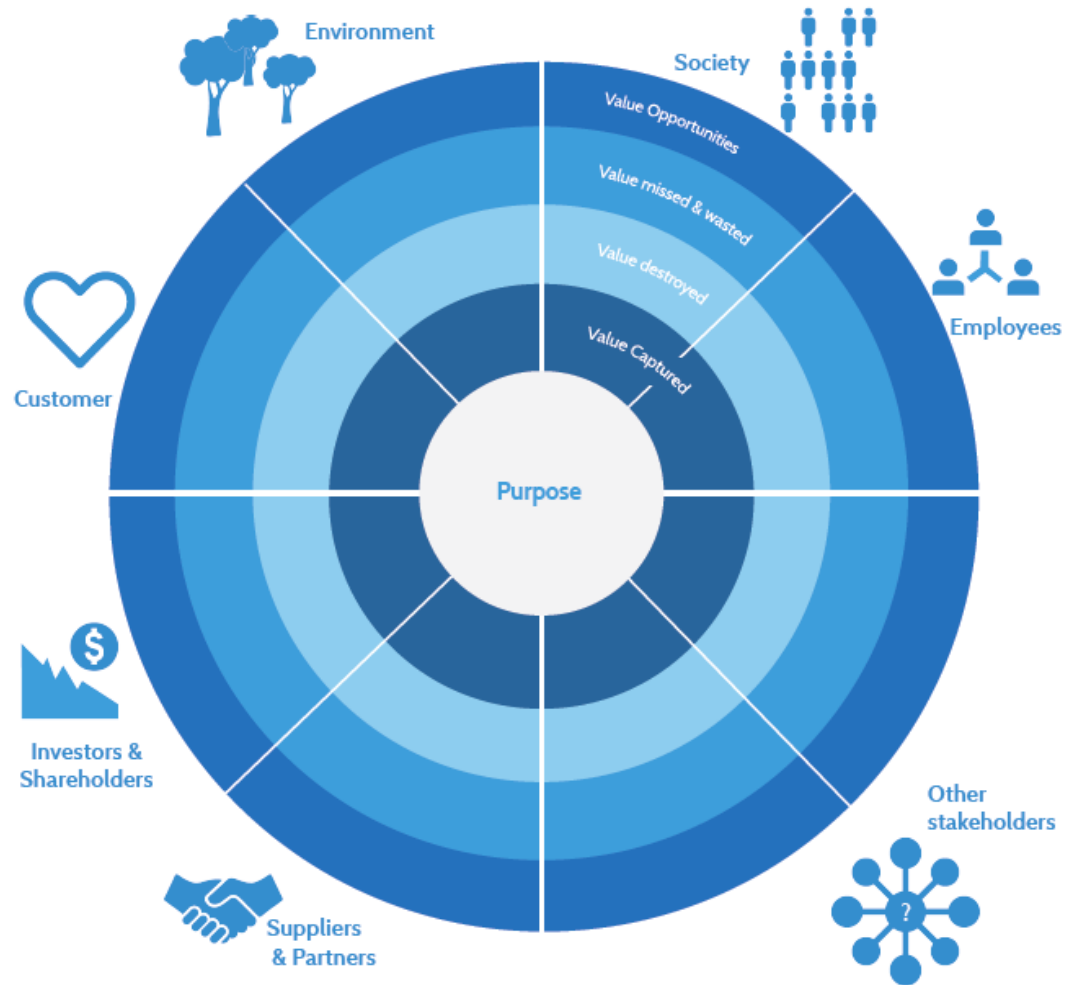


Different forms of value: *Value logic*



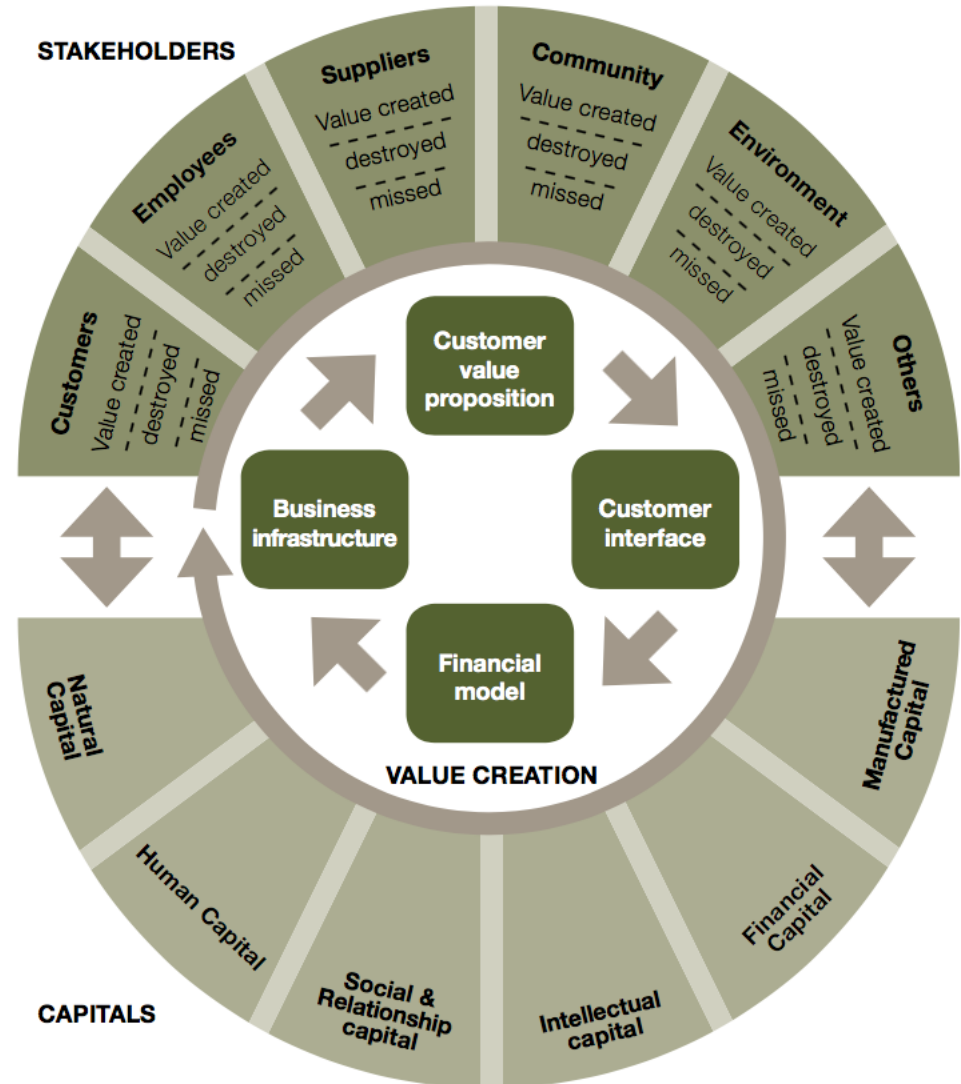
Value mapping tool

- Value captured: value currently provided by company/ product and 'valued' by each stakeholder
- Value missed: value the company failed to capture from stakeholders, current resources and capacity
- Value destroyed: value destroyed for each stakeholder (negative outcomes)
- Value opportunity: new opportunities to resolve value missed and destroyed for stakeholders



NBS report – hourglass model for total value creation

- Business (model) depends on diverse stakeholders that provide different forms of capital, such as investors providing financial capital, the environment providing natural capital, and employees providing intellectual and human capital
- Those stakeholders are the partners with and for whom value is created, destroyed, or even missed.



Sustainable Business Model Archetypes

Major innovation types	Environmental			Social			Economical		
	Archetypes			Archetypes			Archetypes		
Innovations that fit the archetype	Maximise material and energy efficiency	Closing resource loops	Substitute with renewables and natural processes	Deliver functionality rather than ownership	Adopt a stewardship role	Encourage sufficiency	Repurpose for society/ environment	Inclusive value creation	Develop sustainable scale up solutions
	Low carbon manufacturing/ solutions	Circular economy, closed loop	Move from non-renewable to renewable energy sources	Product-oriented PSS – maintenance, extended warrantee	Biodiversity protection	Consumer education, communication	Not for profit	Collaborative approaches (sourcing, production, lobbying)	Incubators and Entrepreneur support models
	Lean manufacturing	Cradle-2-Cradle			Consumer care - - promote consumer health and well-being	Demand management	Hybrid businesses, Social enterprise (for profit)		Open innovation (platforms)
	Low carbon solutions	Industrial symbiosis	Solar and wind-power based energy innovations	Use oriented PSS- Rental, lease, shared	Ethical trade (fair trade)	Slow fashion	Alternative ownership: cooperative, mutual, collectives	Crowd sourcing/ funding	Patient/ slow capital
	De-materialisation (of products/ packaging)	Reuse, recycle, re-manufacture	Zero emissions initiative	Result-oriented PSS- Pay per use	Choice editing by retailers	Product longevity		Peer-to-peer, Sharing	Impact investing / capital
	Increased functionality	Take back management	Slow manufacturing		Radical transparency about environmental/ societal impacts	Premium branding/ limited availability	Social and biodiversity regeneration initiatives	Inclusive innovation	
						Frugal business			

NBS report: understanding the implications

	ENVIRONMENTAL			SOCIAL			ECONOMICAL		
	1. Maximizing material and energy efficiency	2. Closing resource loops	3. Substituting with renewables and natural processes	4. Delivering functionality, not ownership	5. Adopting a stewardship role	6. Encouraging sufficiency	7. Repurposing for society/ environment	8. Inclusive value creation	9. Developing sustainable scale-up solutions
Short definition	Do more with fewer resources. Generate less waste, emissions, and pollution.	Reuse materials and products. Turn waste into feedstocks for other products/ processes.	Use of non-finite materials and energy sources.	Provide services that satisfy users' needs without their having to own physical products.	Proactively engage with all stakeholders to ensure their long-term health and well-being.	Solutions that actively seek to reduce end-user consumption.	Seek to create positive value for all stakeholders, in particular society and environment.	Sharing resources, knowledge, ownership, and wealth creation. Inclusive value generation.	Delivering sustainable solutions at a large scale to maximize benefits for society and the environment.
Innovations within this archetype	Lean manufacturing. Dematerialization. Increased functionality.	Cradle-to-cradle. Industrial symbiosis. Extended producer responsibility.	Cleantech. Renewable energy (e.g. solar, wind). Biomimicry.	Rental/lease. Pay per use. Product-service combinations.	Community development. Biodiversity protection. Choice editing.	Consumer education. Demand management. Slow fashion. Frugal businesses.	Social enterprises and benefit-corporations. Non-profits. Hybrid models. Net positive initiatives.	Collaborative platforms. Collaborative consumption. Peer-to-peer and sharing models.	Open innovation platforms. Incubators. Slow/patient capital.
Typical positive impacts	Enhance efficiency and improve resource use. Save costs.	Reduce waste. Turn waste into value/new business lines. Generate new revenue streams.	Reduces use of finite resources, waste, and pollution. Supports long-term energy supply. Contributes to "green economy."	Can encourage the right behaviours with manufacturers and users. Can reduce the need for physical good.	Ensure long-term well-being of planet (e.g. forests) and society (e.g. health). Ensure long-term viability of the value network.	Actively reduce consumption. Encourage community sufficiency, sustainable living. Build long-term customer loyalty, and new repair and service markets.	Deliver positive societal (e.g. community development) value. Deliver positive environmental (e.g. afforestation) value. Prepare for a resource capacity for long-term business sustainability.	Share resources, skills, and knowledge, and distribute wealth. Leverage resources and talents. Create new business opportunities.	Achieve scale from small sustainability pilot or start-up to large-scale project or business. Create industry-wide change for sustainability. Create breakthrough innovation.
Possible negative side effects	May generate incremental change only. May lead to rebound effects. May lead to job losses.	May lead to quicker sales cycles and more material use. May sustain waste streams because waste = value.	"Carbon lock-in" and NIMBY prevent uptake. Embedded footprint of production (e.g. solar panels). Lack of recyclability consideration of (solar-based) products.	More product/ service usage. If not combined with efficiency improvements, it may have negligible environmental impact improvement.	More product/ service usage. If not combined with efficiency improvements, it may have negligible environmental impact improvement.	Potential price premium for consumers. Remaining niche because it goes against "growth" principles.	Potential to remain niche without policy changes. Potential to remain niche within current capitalist framework.	If not combined with efficiency improvements, it may lead to limited environmental improvement. May induce more product/service use due to wider accessibility.	Focus on scale might detract from sustainability purposes. Risk of unproven radical innovation.

Example: Deliver functionality, not ownership

Value Proposition	Environmental			Social			Economic		
	Maximize material and energy efficiency	Closing resource loops	Redesign with renewable and natural processes	Deliver functionality rather than ownership	Adapt a disassembly rate	Exchange efficiency	Reconfigure for usage/ environment	Increase value retention	Develop sustainable business solutions
Value Proposition	Low carbon manufacturing footprint	On-site assembly, closed-loop	Use of renewable energy sources	Product lifecycle management, minimal waste	Redesign for disassembly	Low carbon footprint	Low carbon footprint	Low carbon footprint	Low carbon footprint
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Bugaboo FlexPlan: sell access – not ownership

Value destroyed:

- Customers buy an expensive product which they need to get rid of after a short period → negative impact from wasted resources and economic loss

Value missed:

- Products made to last for at least 8 years: large second-hand market not tapped into
- Family expansion – need another stroller

Value opportunities:

- Refurbish, remanufacture and recycle
- Create a new market for lower end of market
- Create a flexible offering for expanding families



Example: Closing resource loops

British Sugar – biggest sugar refiner as well as tomato grower

Value destroyed:

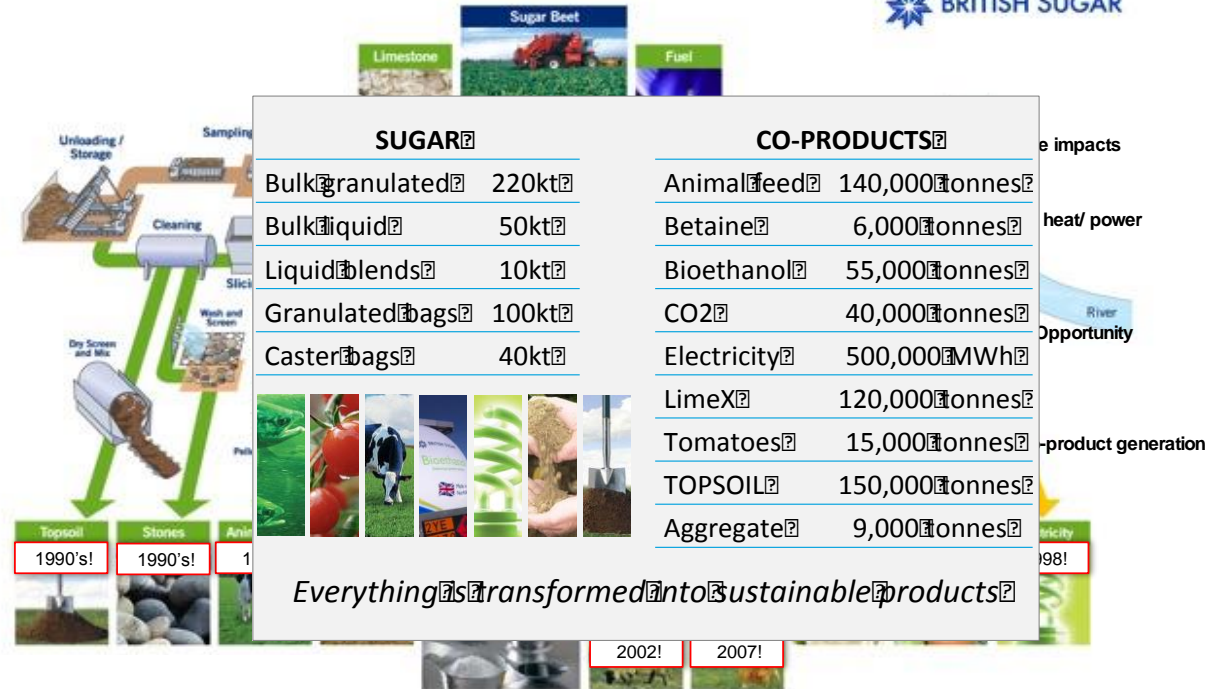
- Carbon emissions from refining process

Value missed:

- Low grade heat from the process, wasted into the environment

Value opportunities:

- Convert value destroyed into a positive – e.g. CO₂ to pump into greenhouses for tomato growing; pulp for animal feed
- Captures value missed – latent heat for greenhouse



Material	Environmental	Social	Economic
Maximize material and energy efficiency	Closing resource loops	Adopt a circular economy	Develop sustainable value chains
Low carbon manufacturing	Reduce CO ₂ emissions	Reduce CO ₂ emissions	Reduce CO ₂ emissions
Low carbon manufacturing	Reduce CO ₂ emissions	Reduce CO ₂ emissions	Reduce CO ₂ emissions
Low carbon manufacturing	Reduce CO ₂ emissions	Reduce CO ₂ emissions	Reduce CO ₂ emissions
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Example: Closing resource loops

	Environmental	Social	Economical
Maximize material and energy efficiency	<ul style="list-style-type: none"> Close resource loops Minimize waste Use renewable resources 	<ul style="list-style-type: none"> Develop sustainable value chains Develop sustainable work-up solutions 	
Minimize environmental impact	<ul style="list-style-type: none"> Reduce CO₂ emissions Reduce energy consumption Reduce water consumption Reduce waste Reduce hazardous substances Reduce noise Reduce odors Reduce air emissions Reduce land use Reduce biodiversity loss Reduce soil degradation Reduce water pollution Reduce marine pollution Reduce transboundary impacts Reduce climate change impacts Reduce other environmental impacts 	<ul style="list-style-type: none"> Adapt to climate change Adapt to other environmental changes Adapt to social changes Adapt to economic changes 	<ul style="list-style-type: none"> Maximize resource efficiency Maximize energy efficiency Maximize material efficiency Maximize water efficiency Maximize land efficiency Maximize biodiversity Maximize soil health Maximize water quality Maximize air quality Maximize land use efficiency Maximize marine resource efficiency Maximize transboundary resource efficiency Maximize climate change resource efficiency Maximize other environmental resource efficiency

British Sugar – biggest sugar refiner as well as tomato grower

Value destroyed:

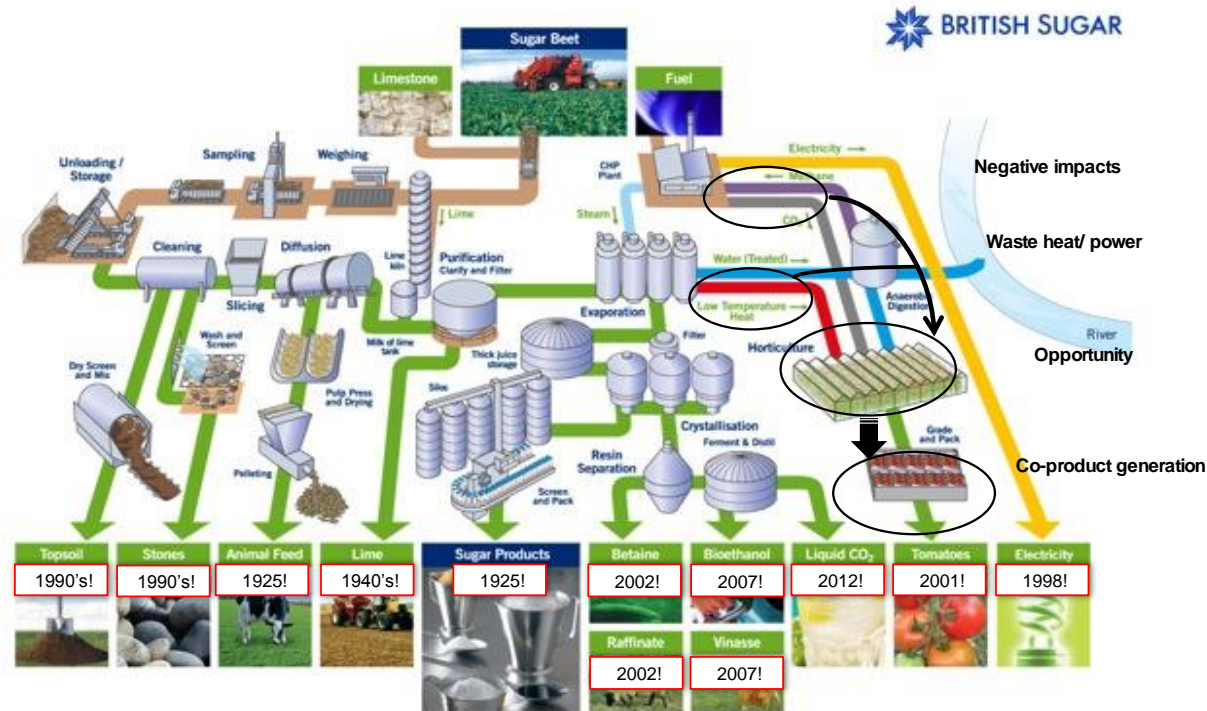
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What's next?

- Business model experimentation for sustainability
- Sufficiency, Slow consumption
- Designing business models with societal and environmental intent and impact
- Tracking, measuring and reporting societal and environmental impact
- Collaborations focused on system-level change

Business Model Experimentation for Sustainability

Nancy M.P. Bocken, Ilka Weissbrod and Mike Tennant



Towards a sufficiency-driven business model: Experiences and opportunities

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Dear President Trump,

As some of the largest companies based or operating in the United States, we strongly urge you to keep the United States in the Paris Agreement on climate change.

Climate change presents both business risks and business opportunities. Continued U.S. participation in the agreement benefits U.S. businesses and the U.S. economy in many ways:

- Strengthening Competitiveness: By requiring action by developed and developing countries alike, the agreement ensures a more balanced global effort, reducing the risk of competitive imbalances for U.S. companies.

Sincerely,

Adobe • Apple • Blue Cross Blue Shield of Massachusetts •
Danfoss • Facebook • Gap, Inc. • Google •
Hewlett Packard Enterprise • Ingersoll Rand •
Intel Corporation • Johnson Controls • Levi Strauss & Co. •
Mars Incorporated • Microsoft • Morgan Stanley •
National Grid • PG&E Corporation • Royal DSM • Salesforce •
Schneider Electric • Tiffany & Co. • Unilever • VF Corporation



8 May 2017

LETTER FROM GLOBAL INVESTORS TO GOVERNMENTS OF THE G7 AND G20 NATIONS

This letter is signed by 217 investors representing more than USD 15 trillion in assets.

As long-term institutional investors, we believe that the mitigation of climate change is essential for the safeguarding of our investments.

We have previously conveyed our strong support for the Paris Agreement [link] and we reiterate our call for governments to continue to support and fully implement the Agreement.

We urge all nations to stand by their commitments to the Agreement and to put in place policy measures to achieve their nationally-determined contributions (NDCs) with the utmost urgency. In addition, we ask governments to develop focused and targeted long-term climate plans by which their NDCs become aligned with the Paris Agreement's goal of "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels."

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