INTRODUCTION

The challenge of integrating and contextualizing the multiple capitals into a data ecosystem that triggers a green, inclusive & open economy

Ralph Thurm (Reporting 3.0)

Challenges

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Integration

… of the multiple capitals (natural, human, social, built, and financial) to optimize positive synergies (and mute / eradicate negative interaction) between and amongst them, to better support the creation of financial, societal (shared), and system value (to employ a recently coined term.) In Daly's and Meadows' terms, this integration links the "ultimate means" of natural capital through the intermediate means and ends of human, social, built, and financial capital, all the way through the "ultimate ends" of well-being.

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Contextualization

… of organization-level impacts on the multiple capitals within the carrying capacities of those capitals at the systems level, either a virtuous (regenerative) or vicious (degenerative) cycle. Context-Based Sustainability (an implementation mechanism of the Principle of Sustainability Context) calls for identifying thresholds separating sustainability from unsustainability, as well as assessing allocations of fair-share contributions to maintaining the overall sufficiency of vital capital resources and cycles.

Challenges

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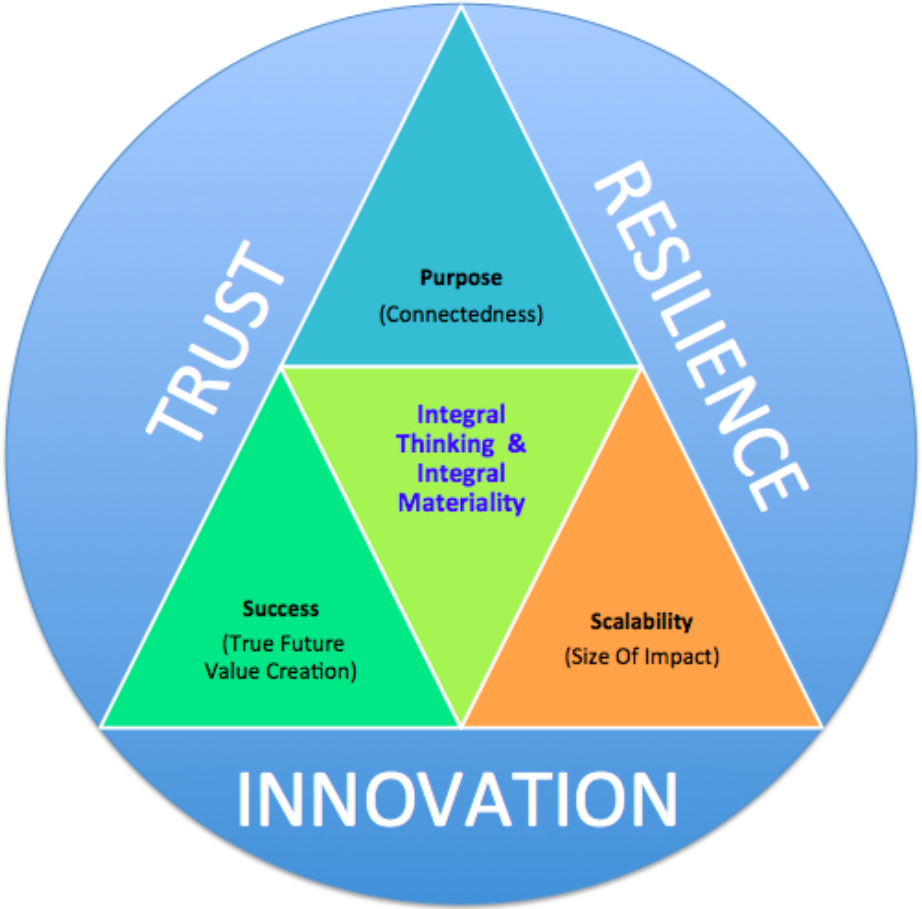
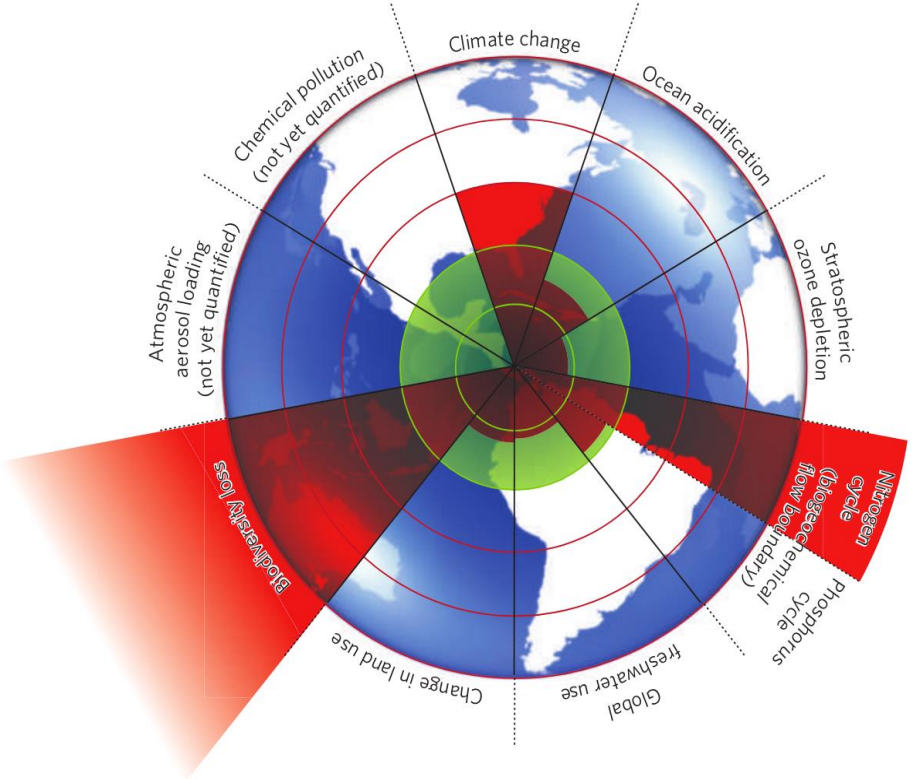
Activation

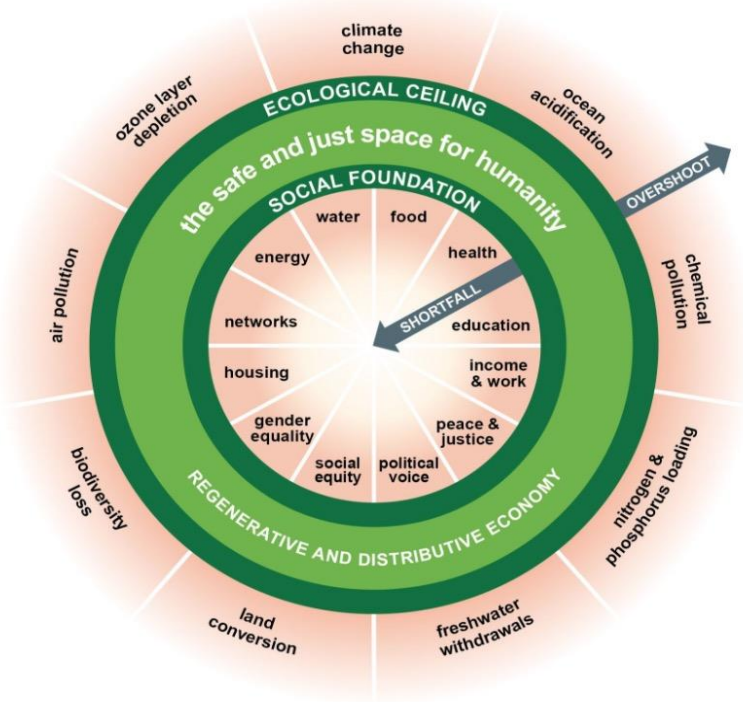
… of responses when the sustainability of any capitals – and hence the potential for biota well-being and human fulfillment – is placed at significant risk. Data without engagement is falls short of its potential; “activated” data fulfills its potential of driving the change signaled by integrated, contextualized data. The key to activation is evidence-based advocacy by context-driven stakeholders. And activated data also catalyzes “acceleration” to scale up change to trigger tipping points of systems change. Indeed, properly contextualized data signals the magnitude of unsustainability and the pace and scale of reform needed to achieve sustainability.

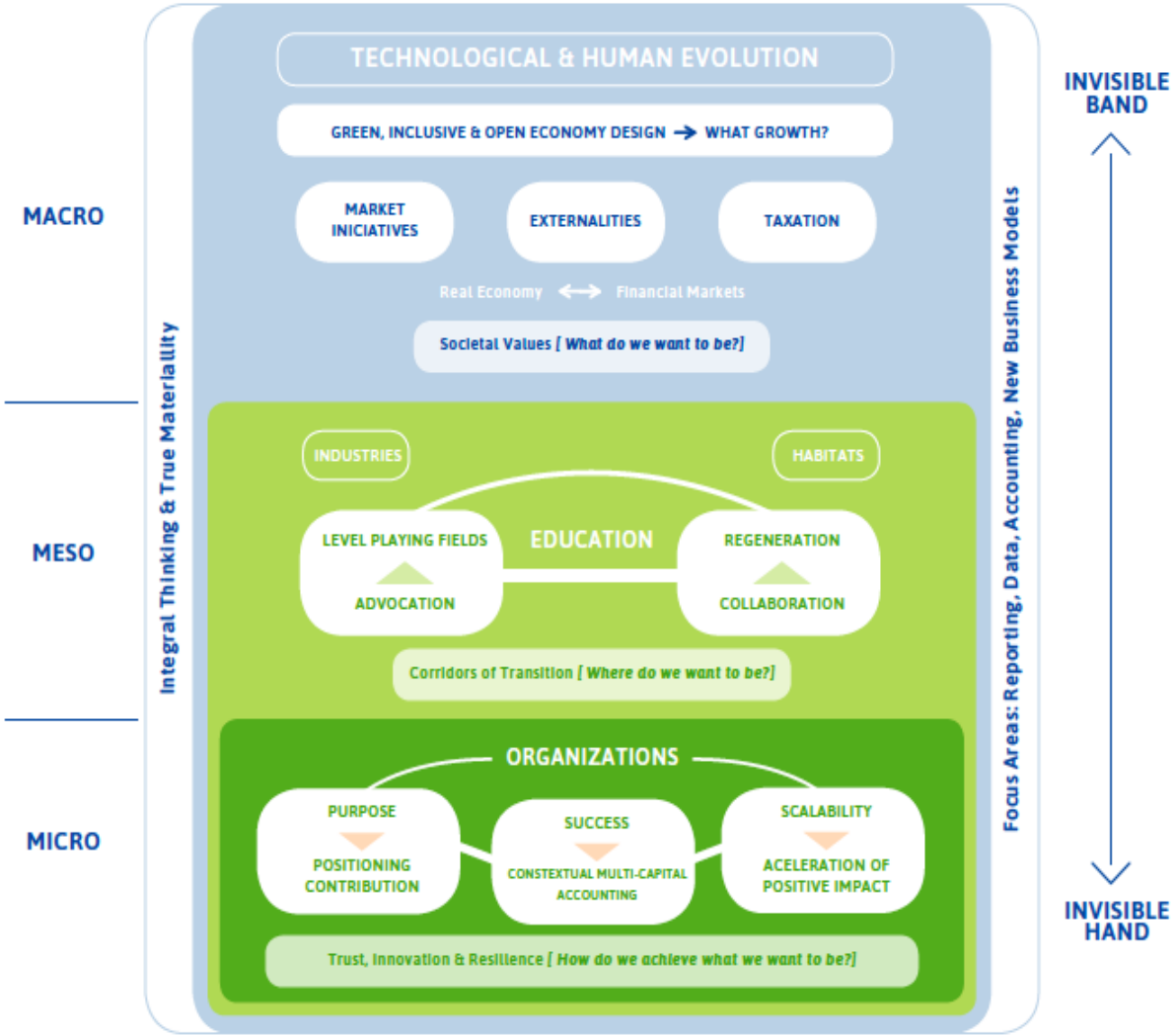
Making the connection to the new impetus



From Rockstrøm to Raworth







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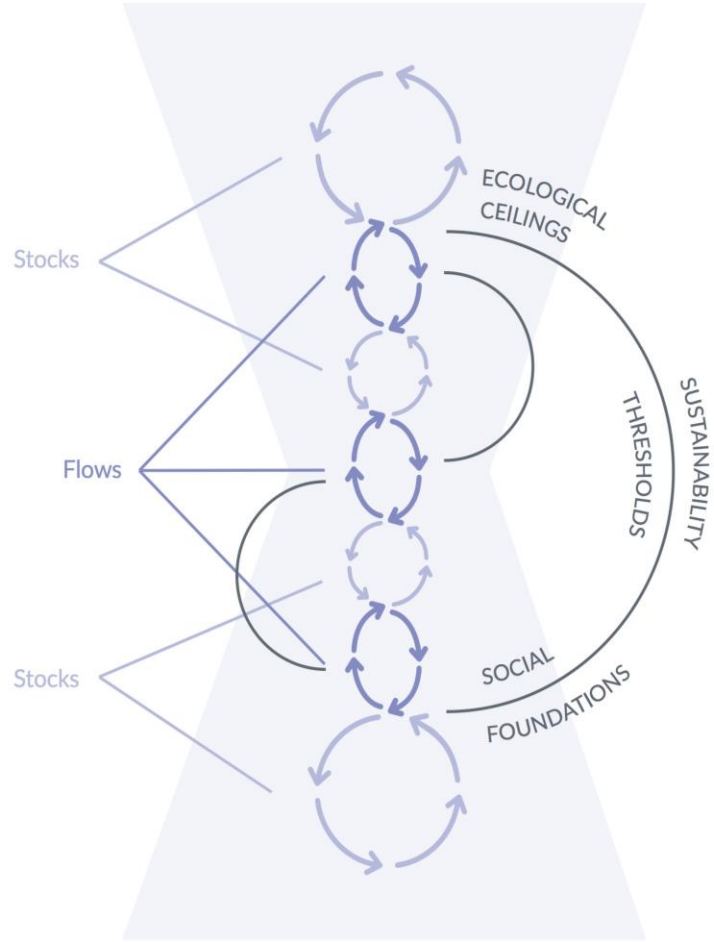
Disclosure with context embraces a seamless information flow from micro to meso to macro level and vice versa.



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Introducing the **Daly 'Hourglass'**

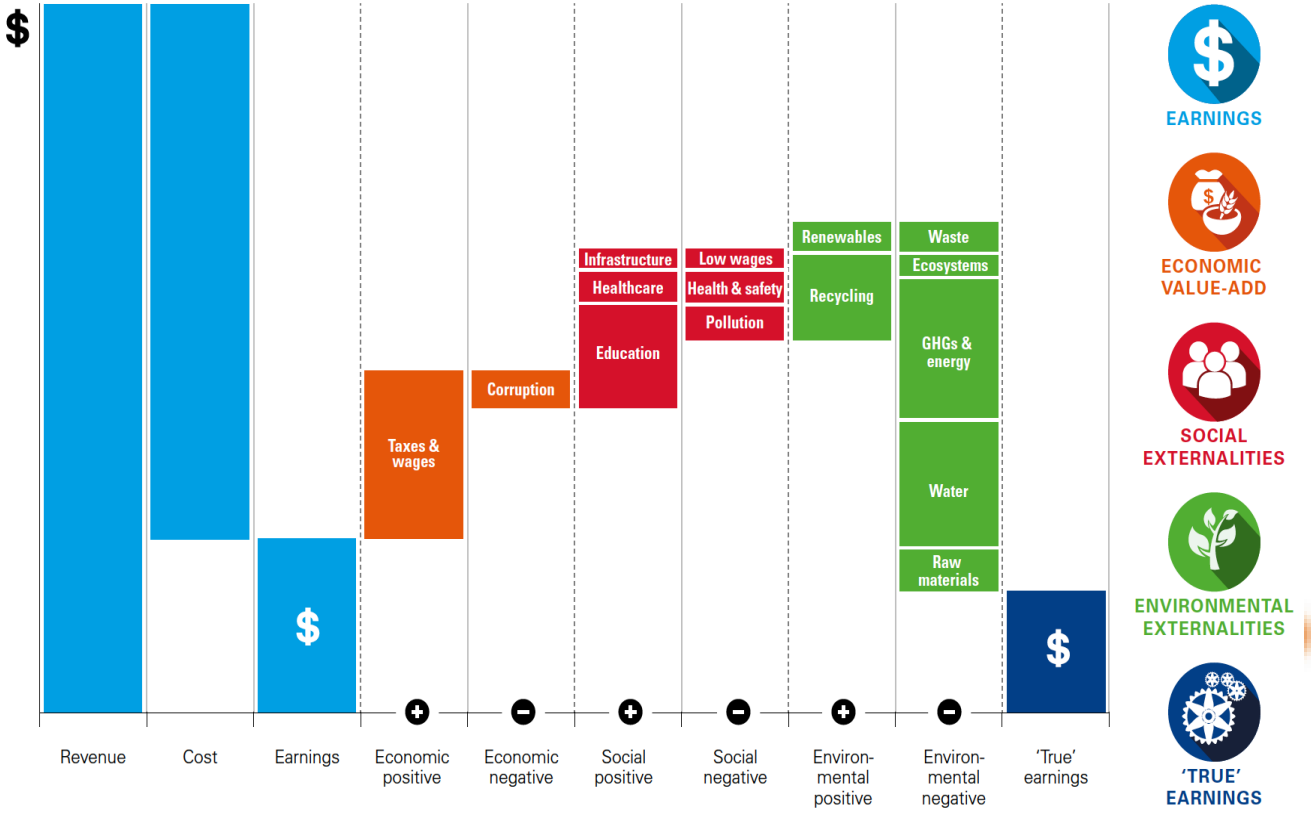
'Our current monocapital, uncontextualized data architecture, wedded as it is to the status quo or to incrementalism at best, yields information shackled to the illusion of progress, thereby damning itself to always fall short of sustainability. So, a fit-to-purpose data / information systems architecture creates seamless data and information flows across 3 dimensions:

- Across the multiple capitals;
- Across the micro / meso / macro levels interlinking companies / industries & habitats / socio-ecological systems;
- Across value cycles.

Example Crown Estate

Capitals	Investment	Depreciation of Value - Internal	Depreciation of Value - External	Appreciation of Value - Internal	Appreciation of Value - External	External Benefits	External Costs
	(+) Positive flow	(-) Negative flow	(-) Negative flow	(+) Positive flow	(+) Positive flow	(+) Positive flow	(-) Negative flow
Financial Resources	The respective flows for financial resources are fully reflected and integrated e.g. profits generated and captured within Gross Value Added.						
Physical Resources	e.g. new development	e.g. building damage via workplace incident	e.g. building damage via flooding (natural)	e.g. additional functionality for existing building	e.g. new policy such as feed in tariff regime increasing the value of renewable energy installations	e.g. free use of space by community groups	e.g. use of public infrastructure without payment
Natural Resources	e.g. additional forestry planting	e.g. mineral resource depletion through extraction	e.g. new policy restricting agricultural activity (political)	e.g. land management practice generating greater soil fertility	e.g. new policy creating additional functionality of seabed (political)	e.g. production of ecosystem services	e.g. greenhouse gases emitted
Our People	e.g. employee well being programmes	e.g. sickness absence	e.g. seasonal epidemic (social)	e.g. greater employee engagement	e.g. improved work-life balance (social)	e.g. employee volunteer schemes in working hours	e.g. under-compensated labour
Our Know-how	e.g. employee training and development programmes	e.g. employee turnover	e.g. obsolescence of existing skill set through innovation (market)	e.g. learning by doing	e.g. new policy creating additional functionality for skills (political)	e.g. production of public information, i.e. knowledge sharing	e.g. consumption of public information
Our Networks	e.g. community investment projects	e.g. late payment of suppliers	e.g. economic downturn straining relationships (market)	e.g. placing unemployed into employment	e.g. economic upturn strengthening relationships (market)	e.g. enhanced visitor well-being	e.g. reduced visitor well being

Example Indian Brewery (KPMG True Value)



Example Multicapital Scorecard (Thomas & McElroy)

Vital capitals

- Constructed
- Economic
- Human
- Natural
- Social & Relationship

BOTTOM LINE	AREAS OF IMPACT	CAPITAL IMPACTS	A Progression score	B Weight	C Weighted score (AxB)	D Fully sustainable score (Bx3)	Gap to fully sustainable (D-C)	Area of impact (AoI) bottom line (C/D)	TRIPLE BOTTOM LINE SCORES
SOCIAL	Product safety		3	5	15	15	0	100%	
	Workplace safety		-1	5	-5	15	20	-33%	43%
	Gender equity		2	4	8	12	4	67%	
ECONOMIC	Living wages		1	1	1	3	2	33%	
	Owners' equity		2	5	10	15	5	67%	79%
	Borrowings		3	5	15	15	0	100%	
ENVIRONMENTAL	Climate system		-2	4	-8	12	16	66%	
	Water		2	3	6	9	3	67%	0%
	Solid waste		1	2	2	6	4	33%	
		OVERALL PERFORMANCE			44	102	58		43%

Note: Areas of Impact shown here are purely illustrative and are always organisation-specific.

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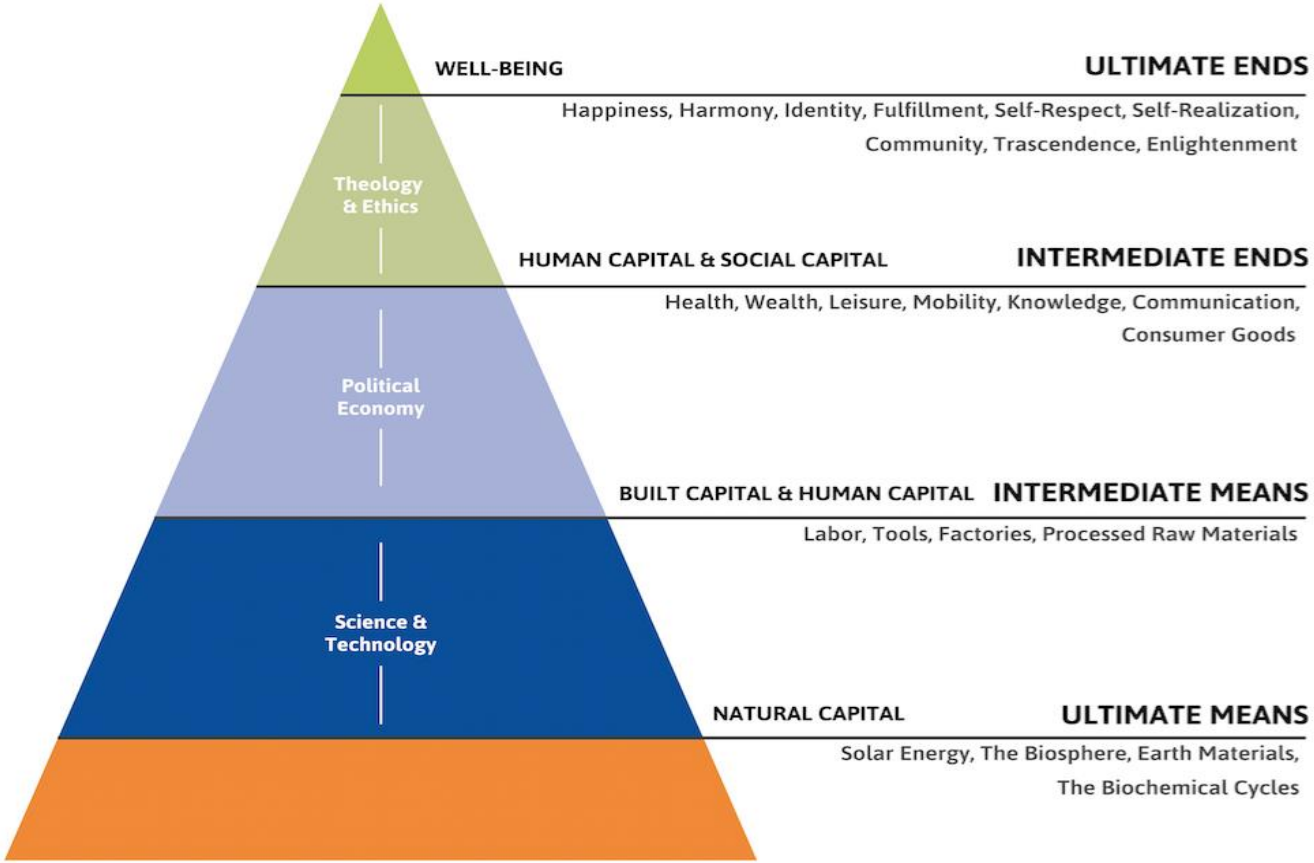
Appendix

The original Daly Triangle



The metamorphosis from triangle to hourglass