



Overview of the
THRIVE
Framework

Measuring what matters most

A New Resource for
Thresholds-Based Sustainability
Performance Assessment and
Business Model Innovation

Presented by Morris Fedeli
18th May 2021



Why THRIVE Project

- Our focus is to research, educate and advocate for a more sustainable future.

One guided by providence and prosperity. Placing civilization back on the trajectory towards thrivable transformations. The imperative is to innovate towards the age of thrivability. Implementing solutions at scale, speed, and scope unseen before.

- We develop theory, tools and technologies to aid humanity in its quest to strive to thrive through providence and prosperity.

We are a leader in the field of sustainability metrics, working alongside UN-affiliated research groups, FEI, various Universities, accelerators/ incubators and consultants/ advisers. We develop systemic holistic modeling tools to address future challenges.

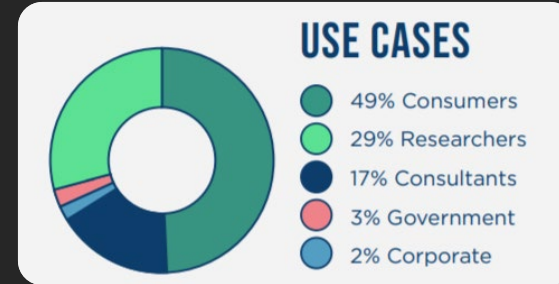


The facts

- Mindset: Mission Impossible => Mission Critical
- One Earth and using 1.7 Earth's worth in resources
- Using First Principles determine a fair and just operating space for humanity
- Devise thresholds and allocations among the population
- Based on facts as informed by the natural and social sciences
- Systemic orchestration provide guidance for the future



Who uses THRIVE



BUSINESS



Encourages business to do good to do well in their pursuit for a competitive advantage

ANALYSTS



Provides business analysts and consultants with tools to guide entity strategies

RESEARCHERS



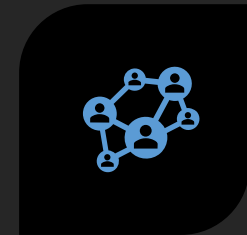
Assists researchers to analyze trends and effectiveness of entity models for sustainability

GOVERNMENTS



Allows governments to forecast the effects of regulatory or legislative actions

CONSUMERS



Empowers individuals, consumers to actively stimulate competition among entities by voting with our wallets



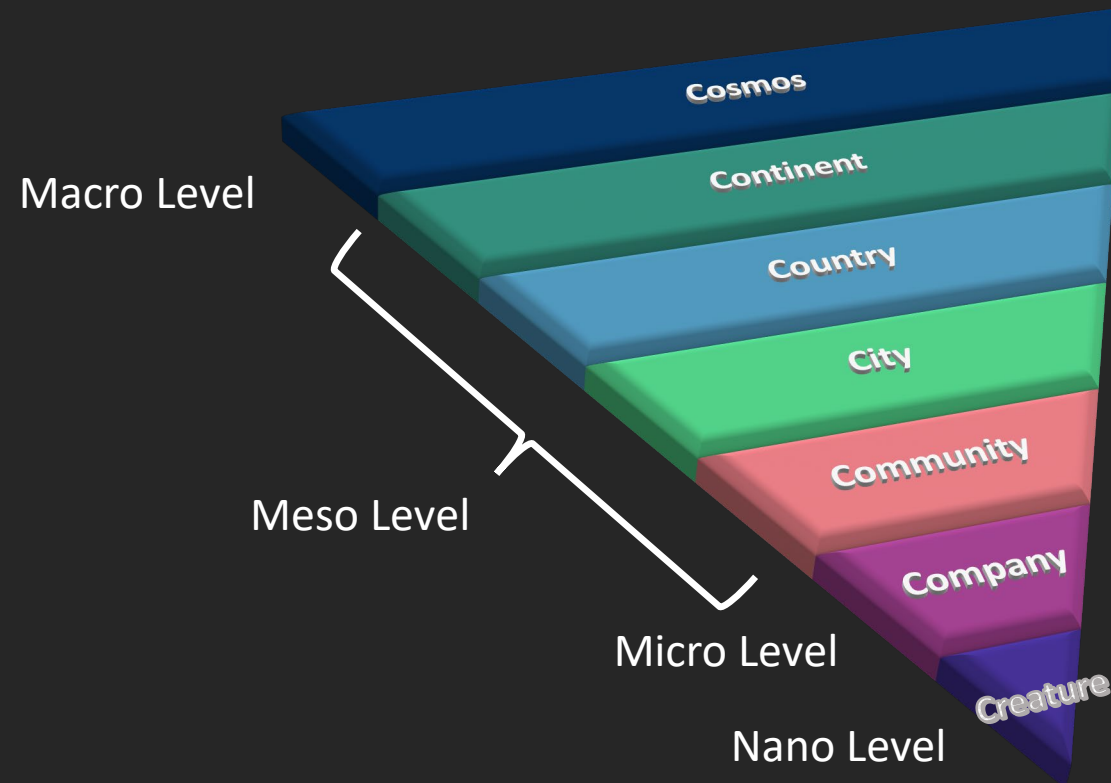
Review of approaches, methods & tools

	Type of provider	Explicit Data Sources (Yes/No)	Public Data (Yes/No)	Explicitly Public Methodology (Yes/No)	Multi Entity Levels (Yes /No)	Includes Entity Model (Yes/No)	Perspective	Entity Level (7Cs)	Context -based (Yes/No)	Determines Impact or Sustainability (Yes/No)	Score type	Single or Multi Topic / Multi-capital / TBL	Topic Alignment	Output
Corporate Knights	Platform	No	Yes	No	No	No	Corporate	Company	Yes	Yes	Quantitative	Multi Topic	Standard	Report
GRI Reports	Framework	Yes	Yes	No	Yes	Yes	Corporate, Investors, Governance, Society Stakeholder	Company	Yes	Yes	Quantitative	Multi Topic	Disclosure	Tool
IIRC <IR>	Framework	No	Yes	No	No	Yes	Corporate	Company	No	Yes	Qualitative	Multi Topic	Standard	Tool
SASB	Framework	Yes	Yes	No	Yes	Yes	Corporate, Investors	Company	Yes	Yes	Quantitative	Multi Topic	Disclosure	Tool
SDGs	Platform	No	Yes	Yes	No	No	Consumer, Corporate, Stakeholder, Governance, Society	Company, Country	Yes	Yes	Quantitative	TBL	Standard	Report
THRIVE Platform	Platform	Yes	Yes	Yes	Yes	Yes	Consumer, Corporate, Stakeholder, Governance, Society	Creature, Company, Community, City, Country, Continent, Cosmos	Yes	Yes	Quantitative	Multi Topic	Standard AND Self-defined	Platform

Source: Assessing the Sustainability Performance of Entities
A review and classification of tools, methods, and approaches, Fedeli & Glinik (2021).



Scale-linking: 7Cs



Source: Assessing the Sustainability Performance of Entities
A review and classification of tools, methods, and approaches, Fedeli & Glinik (2021).

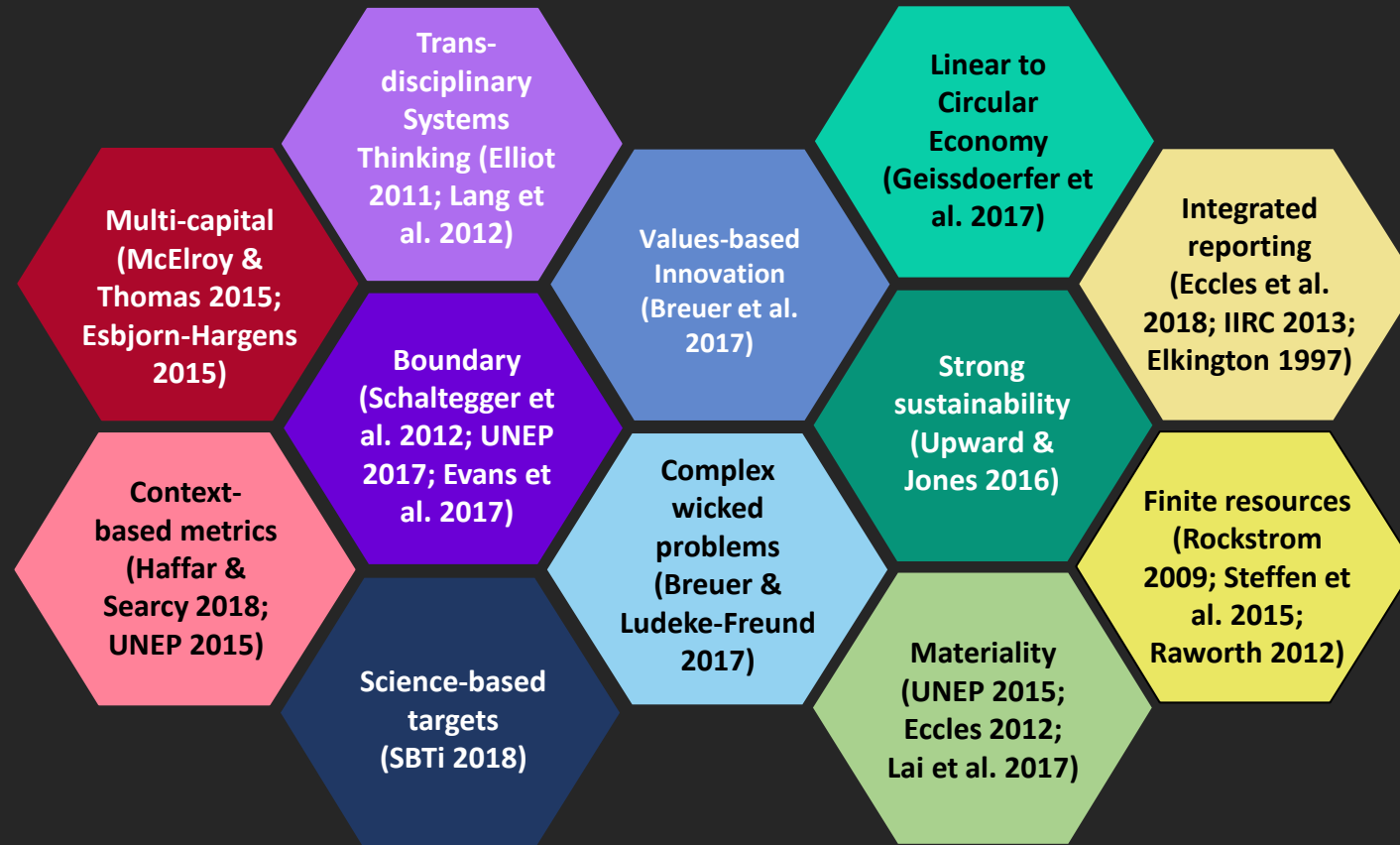
Systemic Holistic Model



Source: Foundational Focus Factors For Strong Sustainability Using Information Systems: The Trajectory Towards Thrivable Transformations, Fedeli & Shrestha (2020).

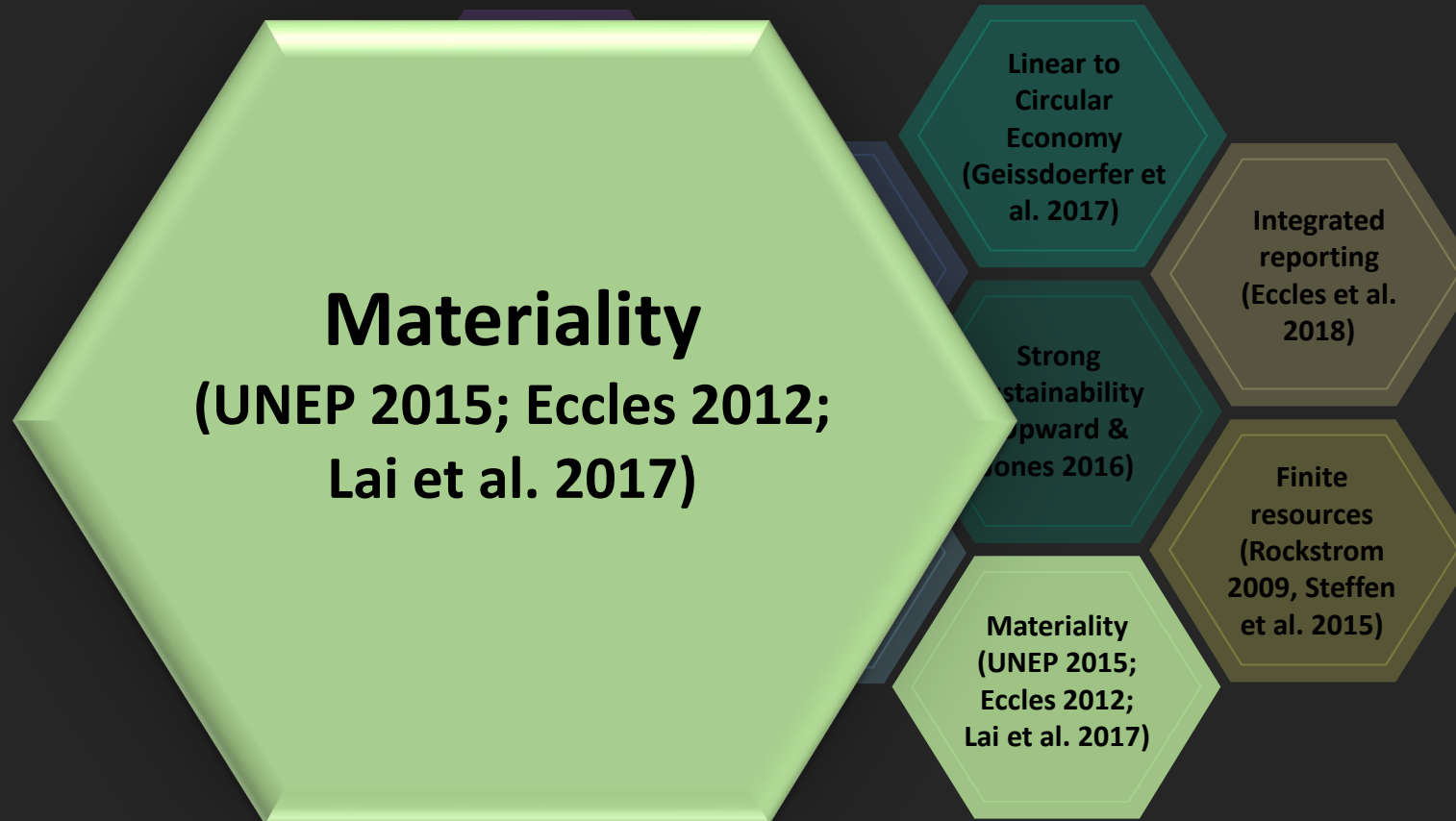


Foundational Focus Factors



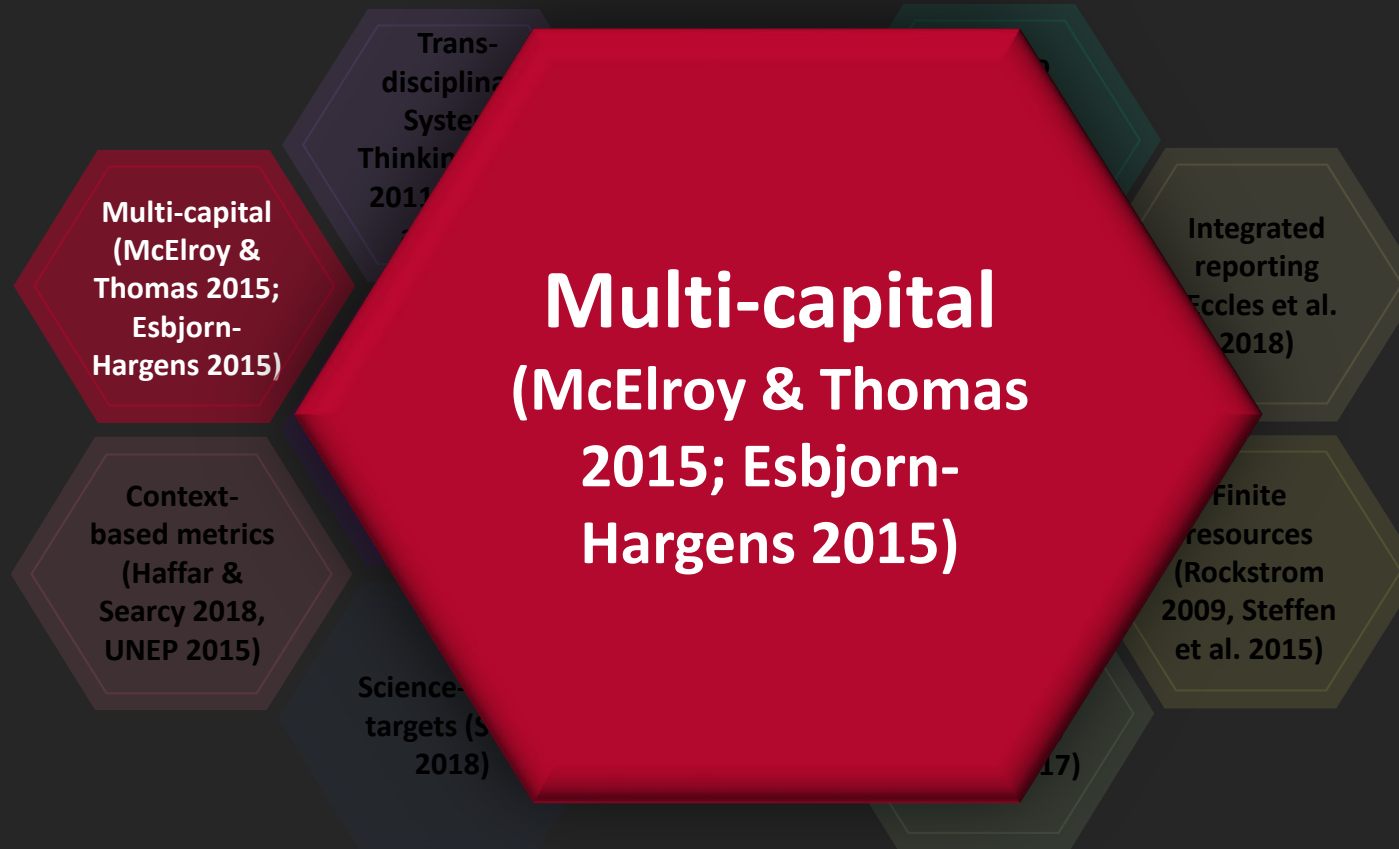
Source: Assessing Corporate Sustainability Performance of Business Models.
How business model innovation drives a successful sustainable business strategy?
Fedeli (2018). Presented at the 3rd New Business Model Conference in Sofia, Bulgaria in 2018.

Foundational Focus Factors



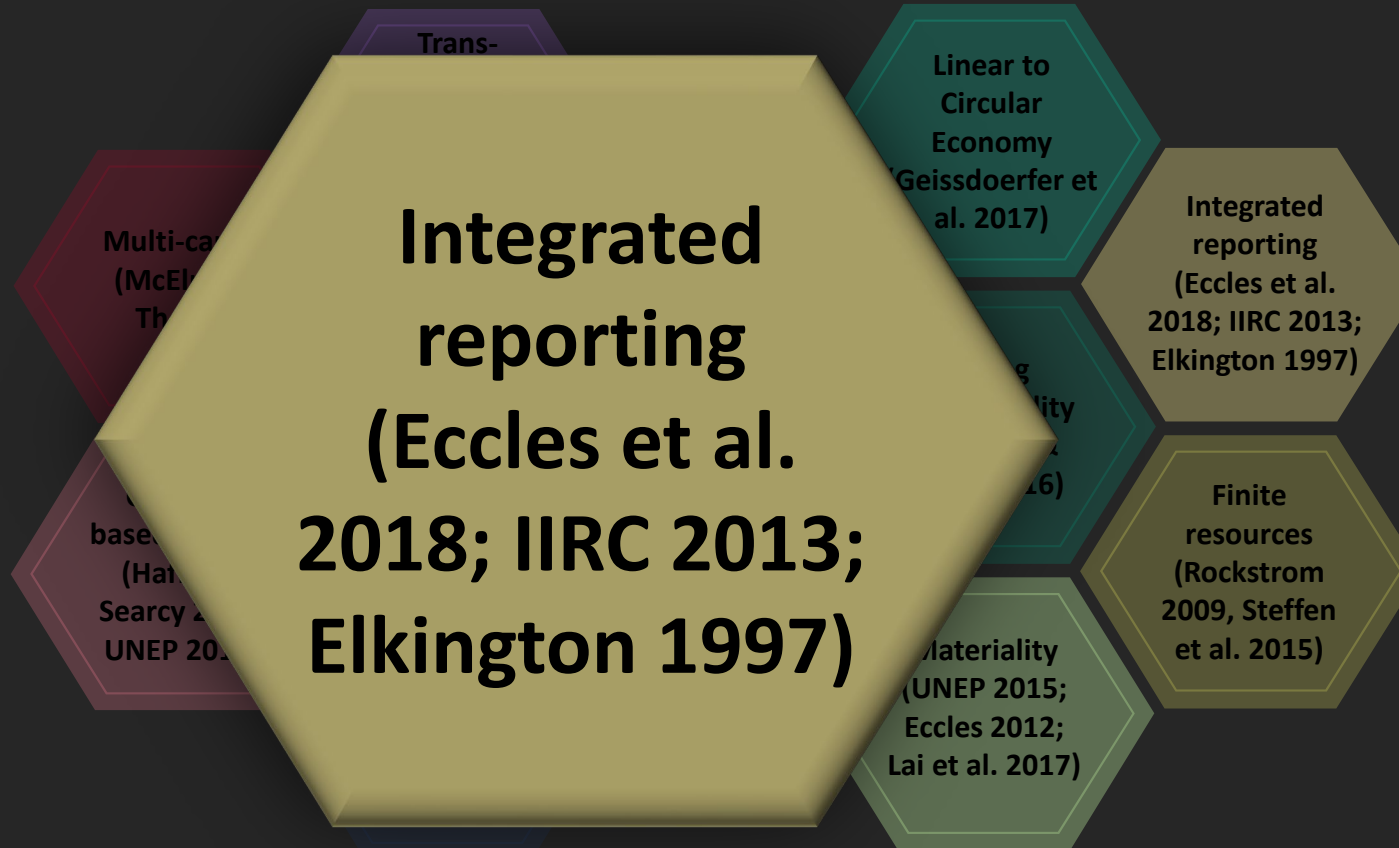
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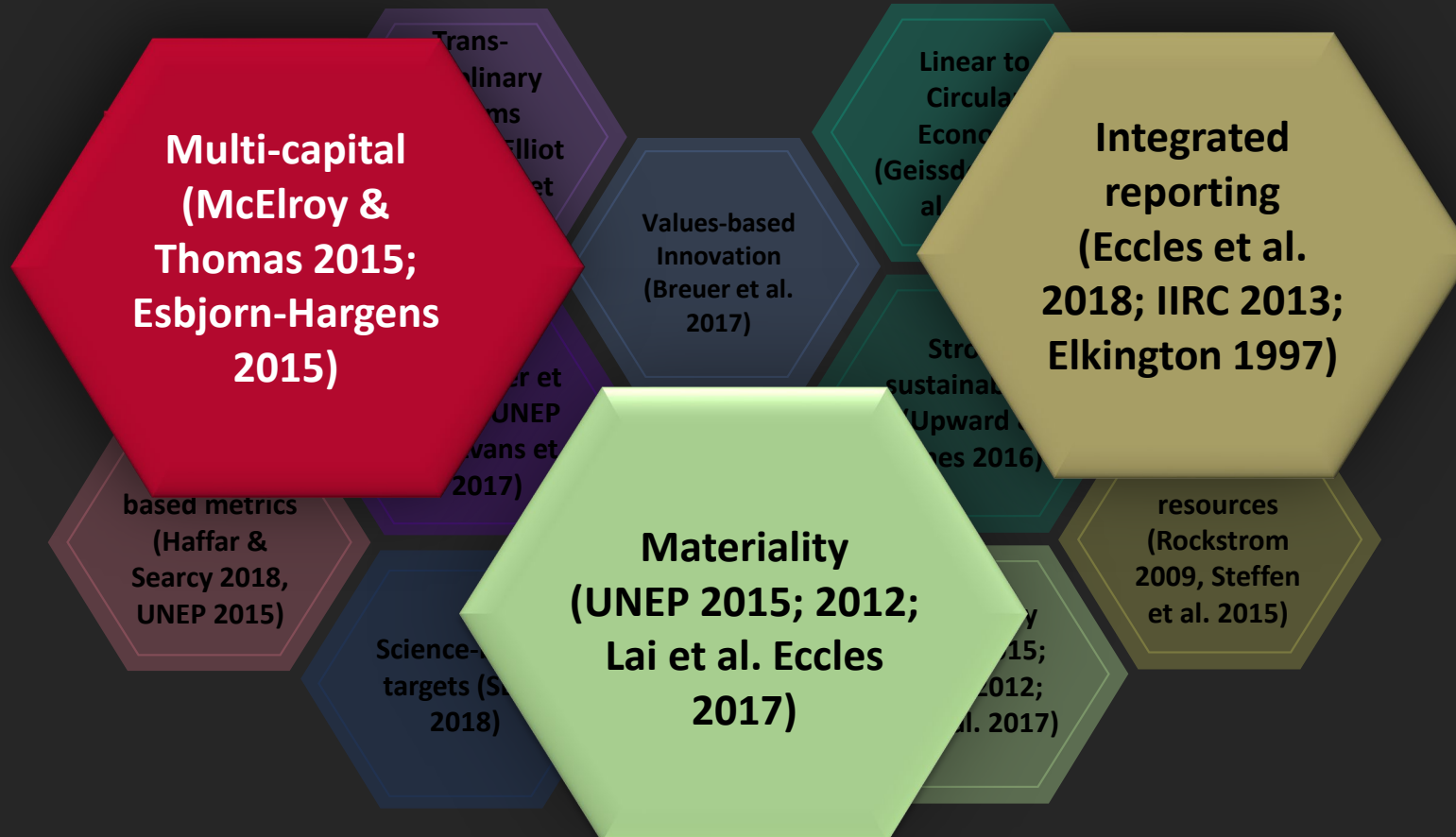
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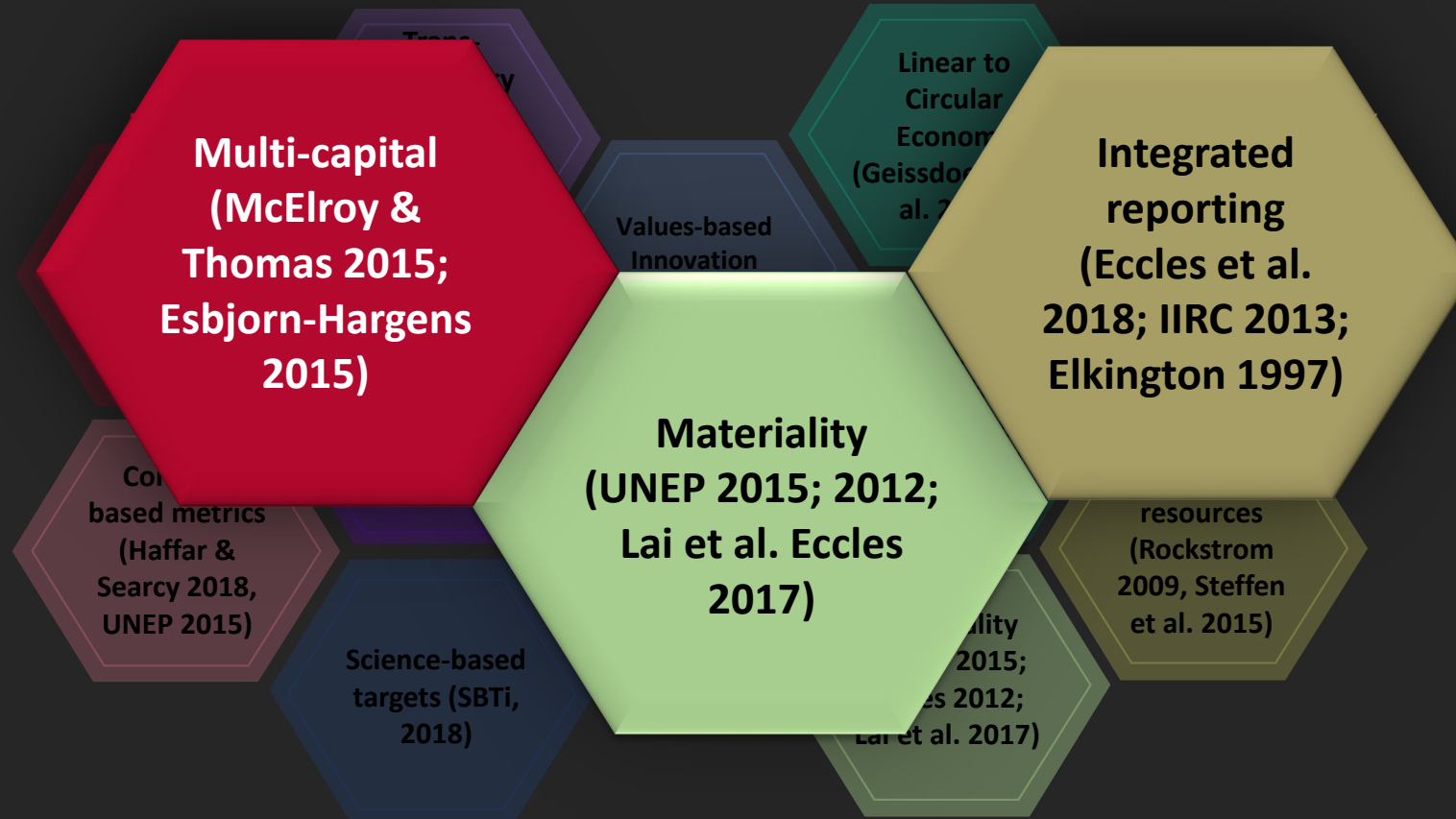
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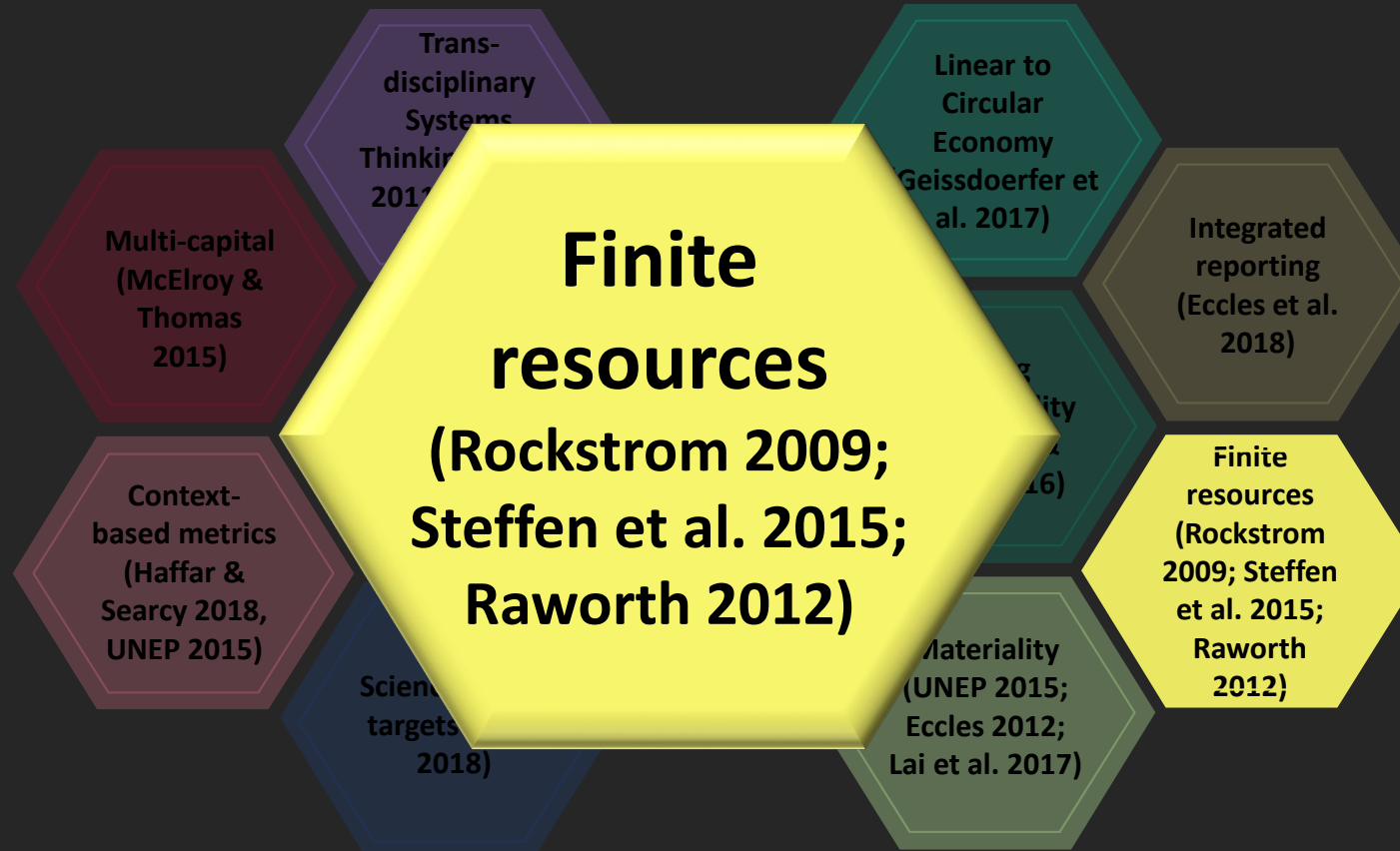
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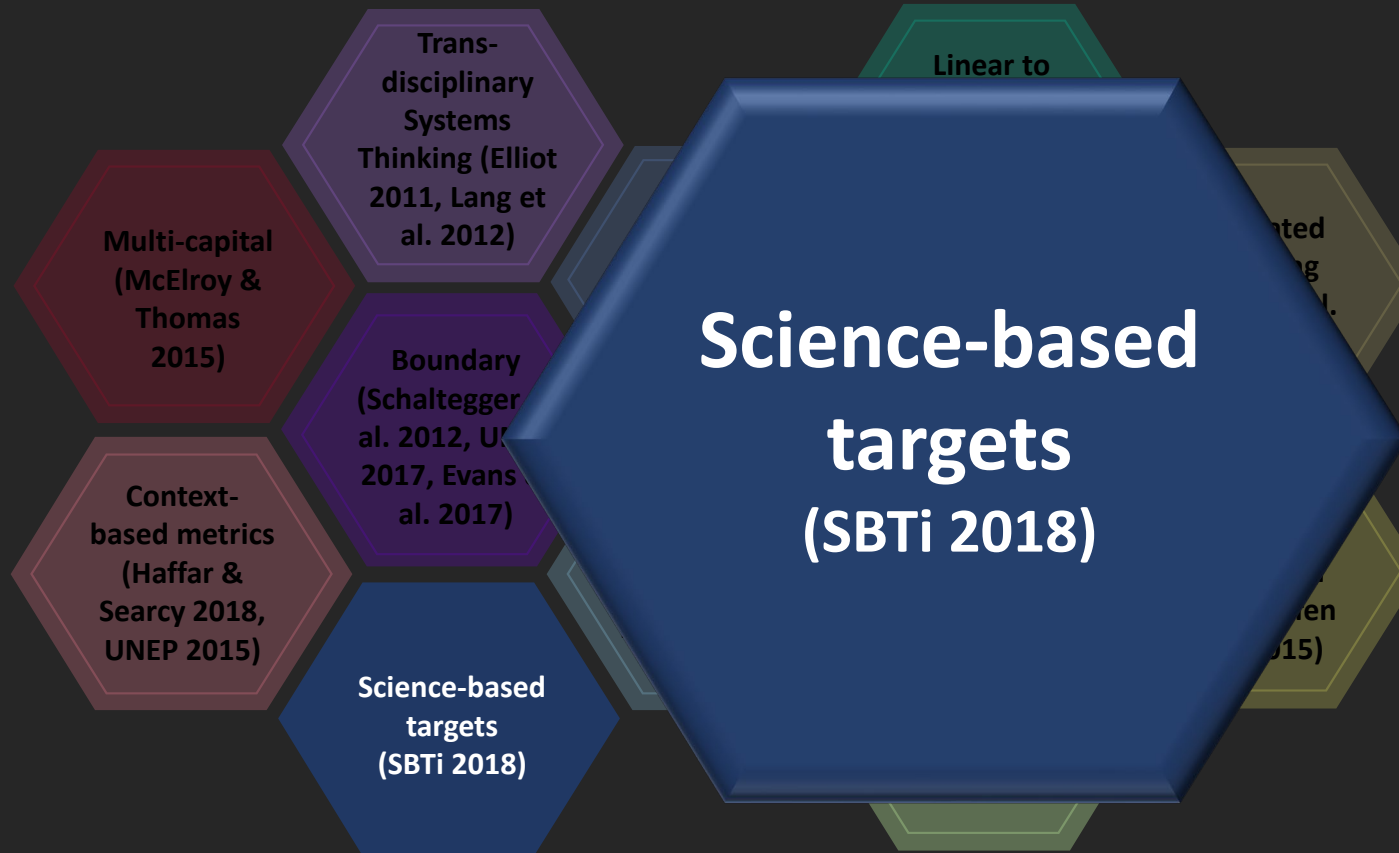
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Foundational Focus Factors



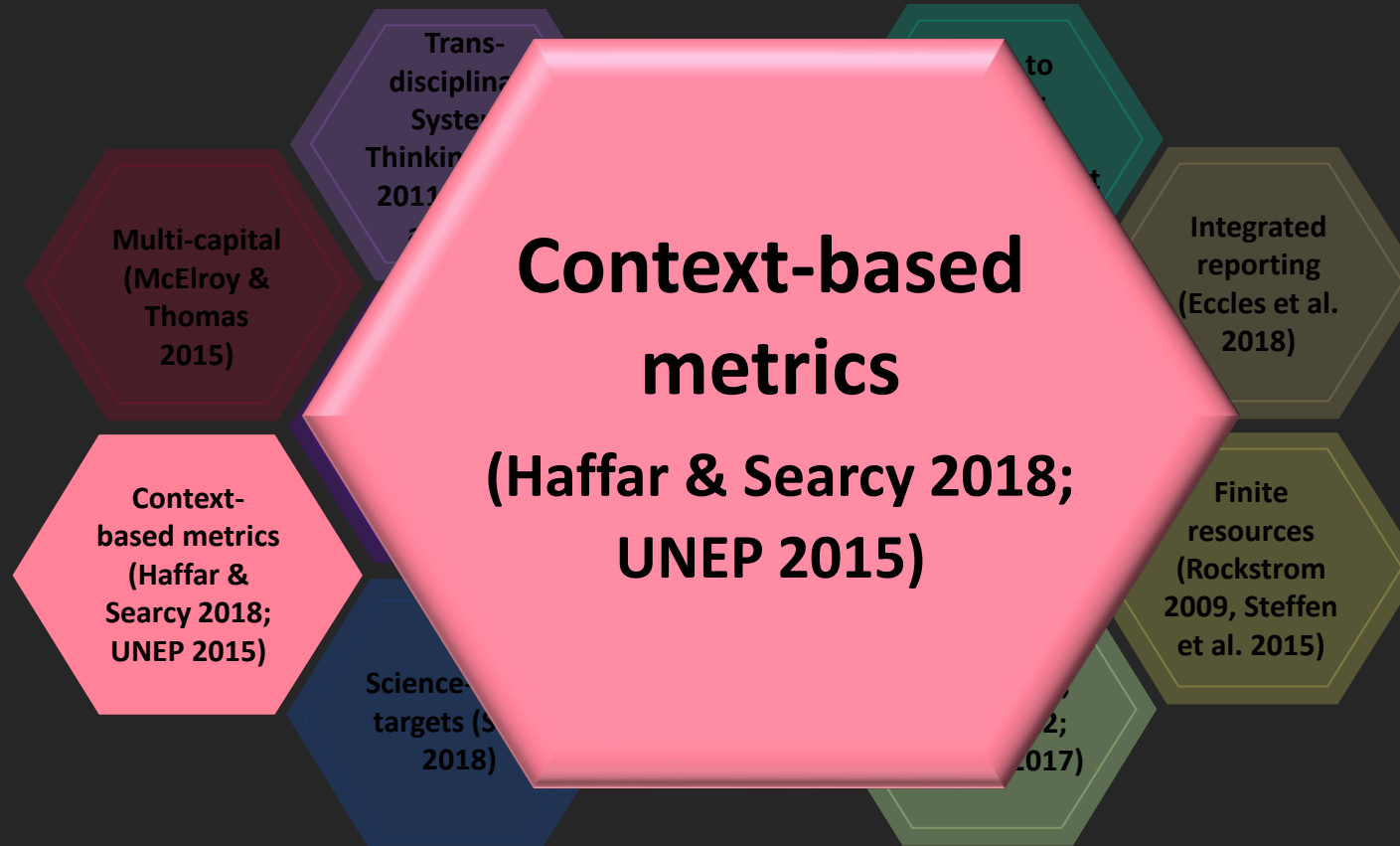
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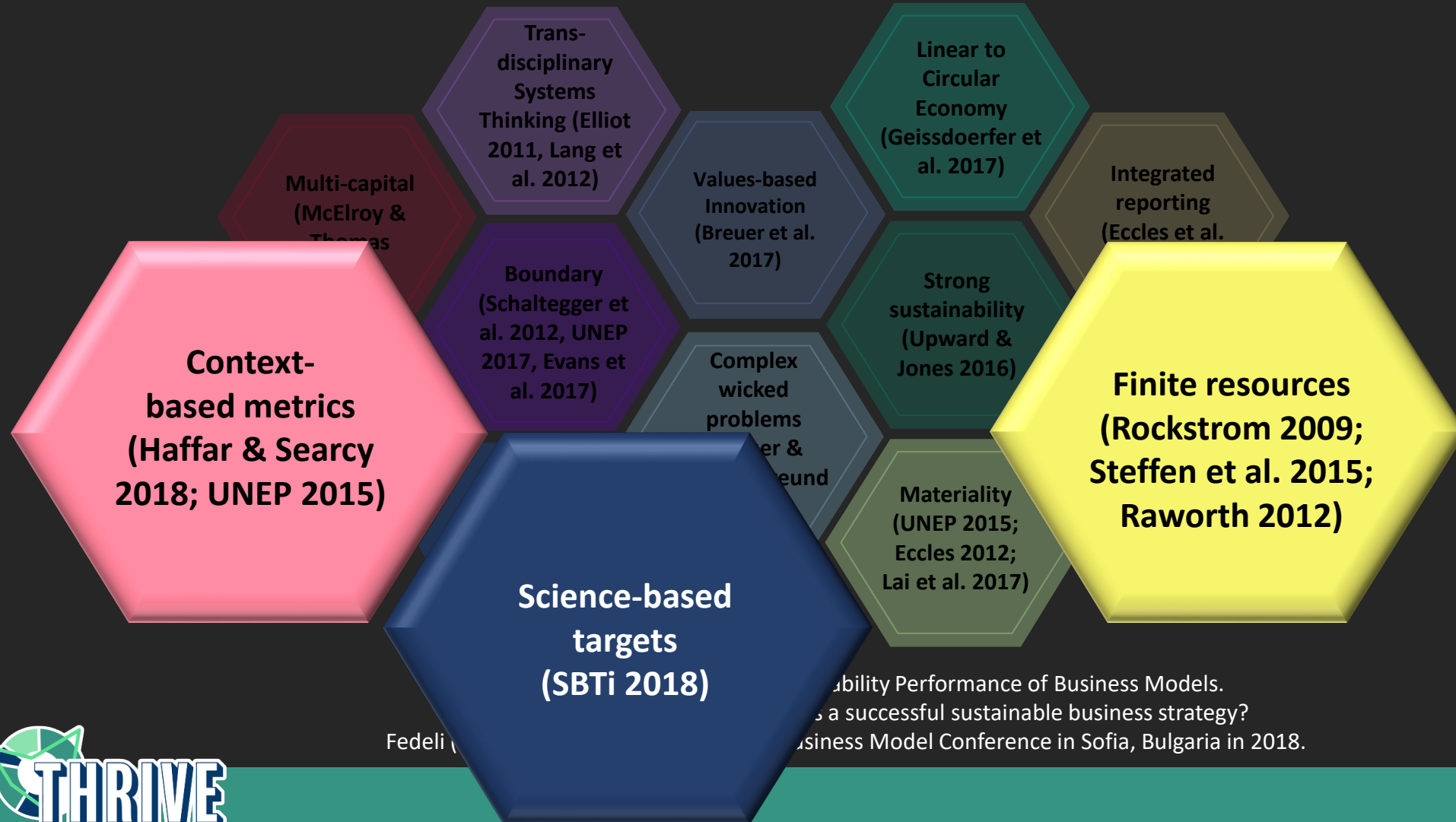
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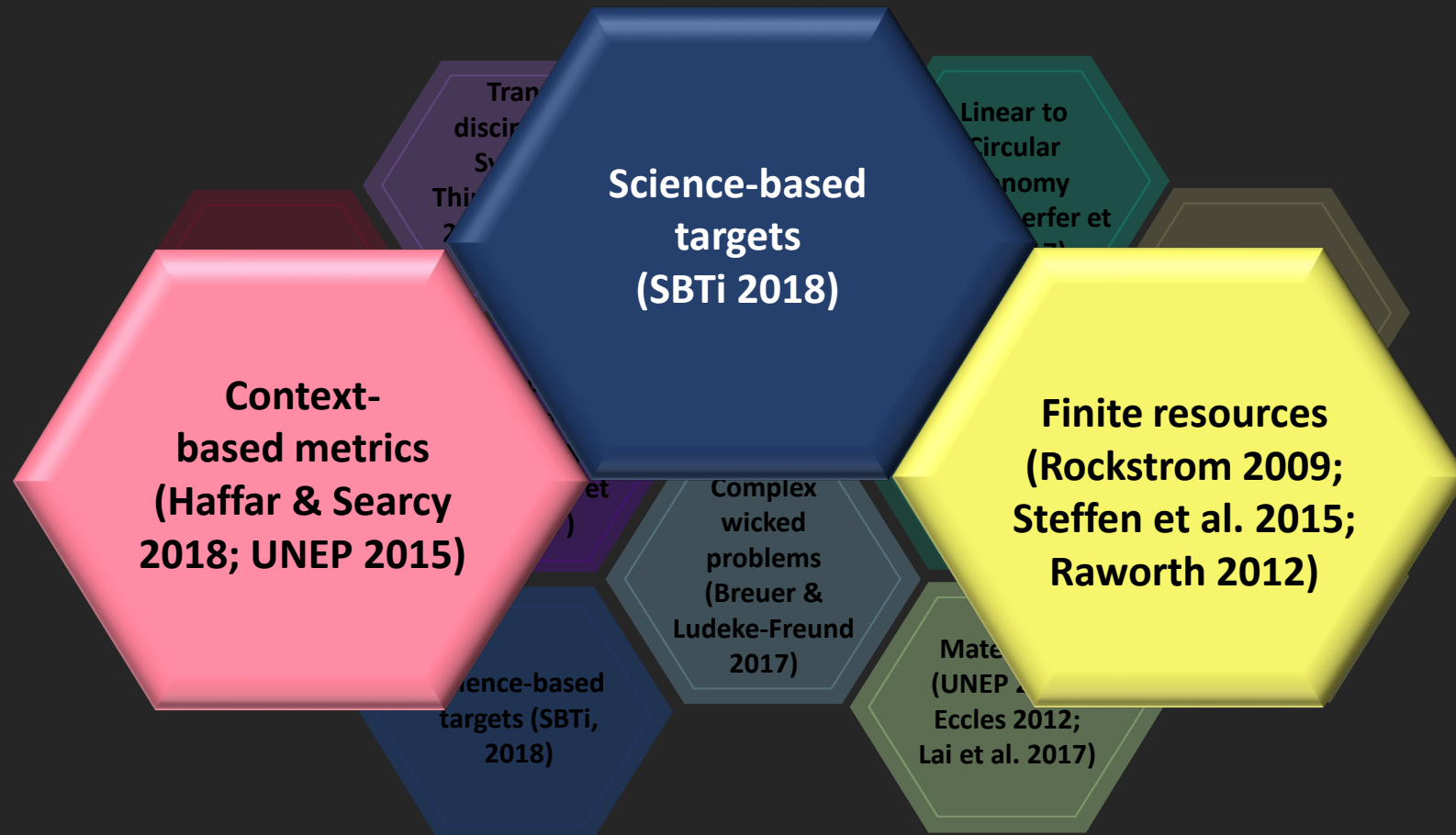
Foundational Focus Factors



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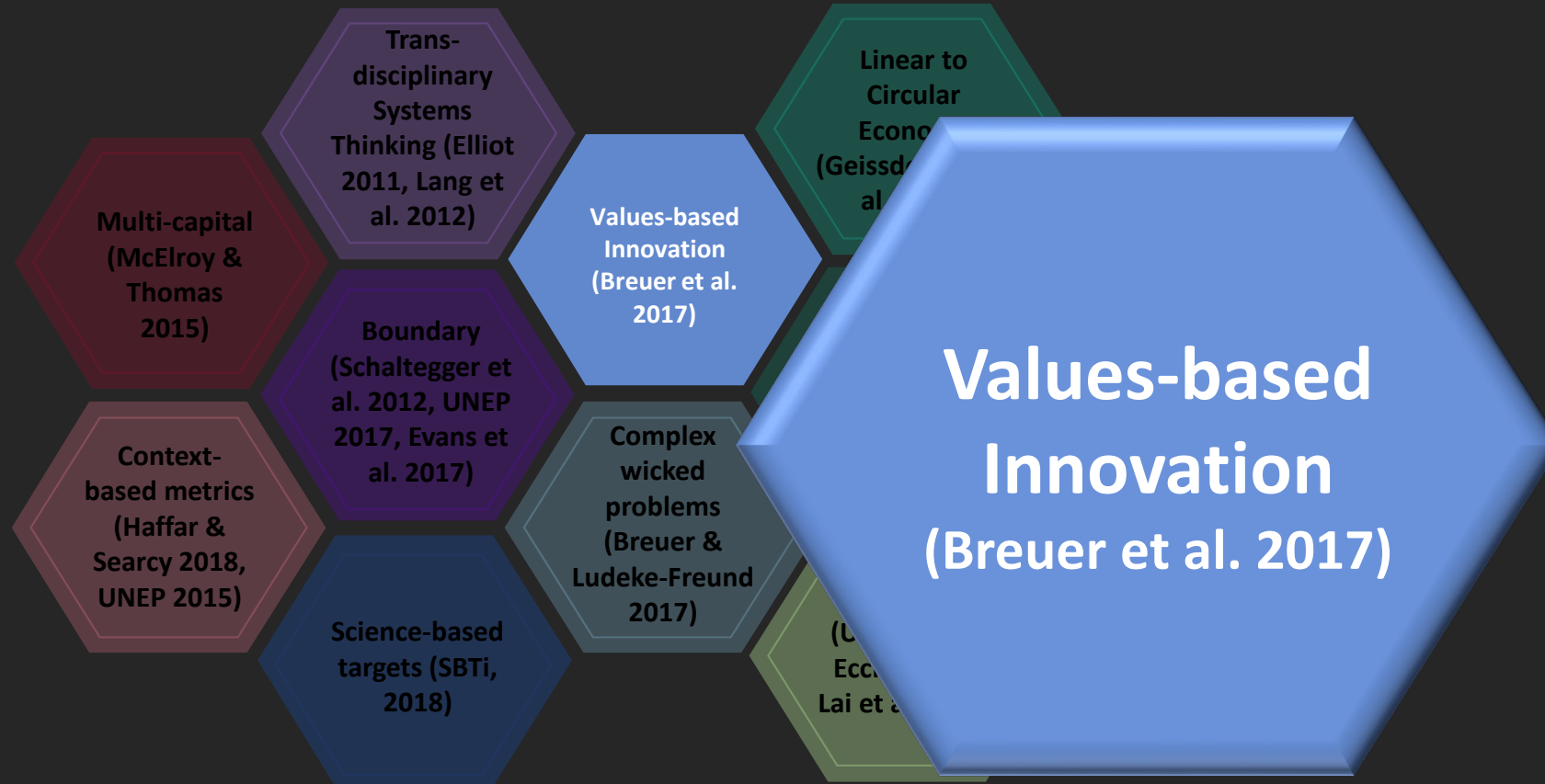


Foundational Focus Factors



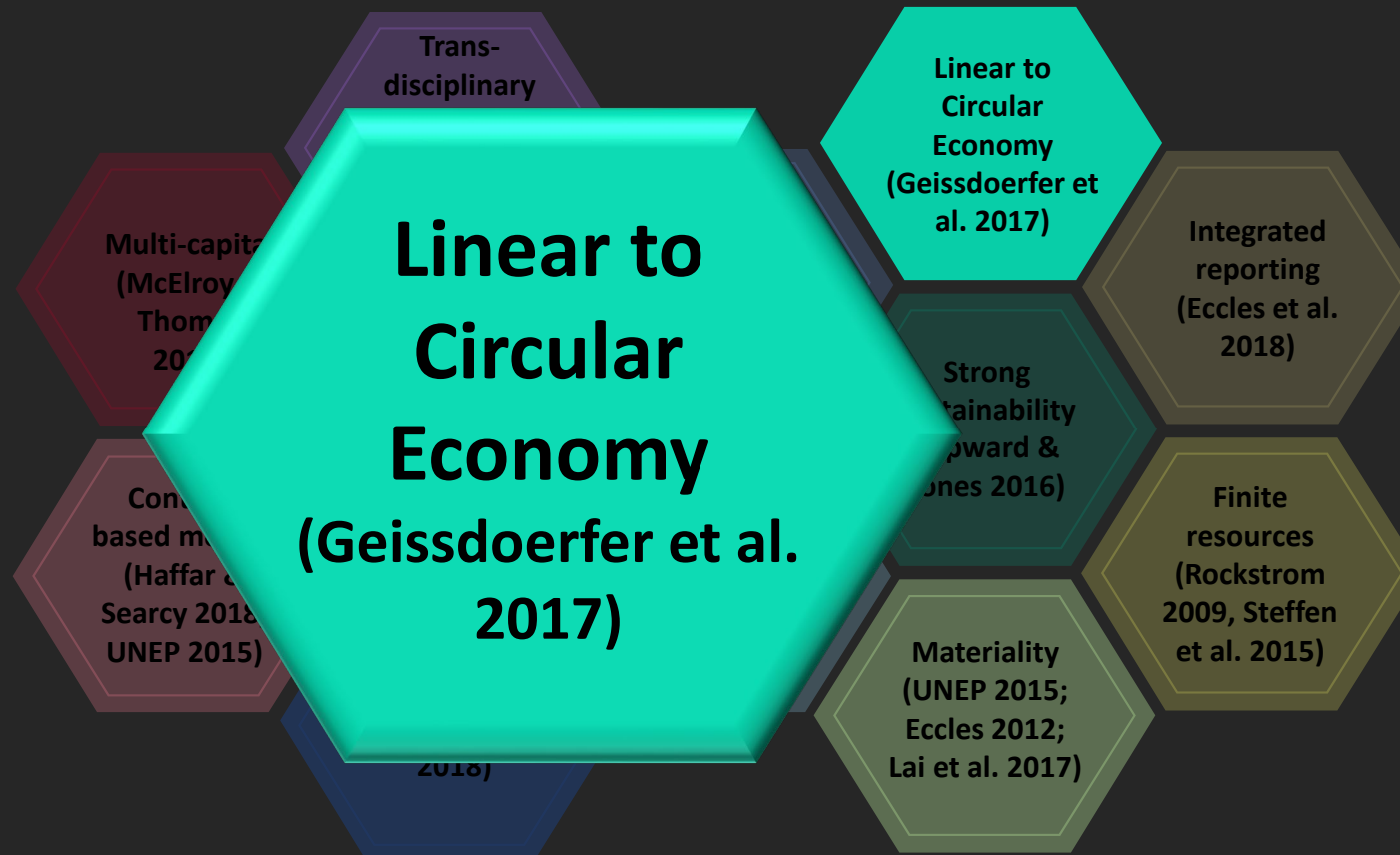
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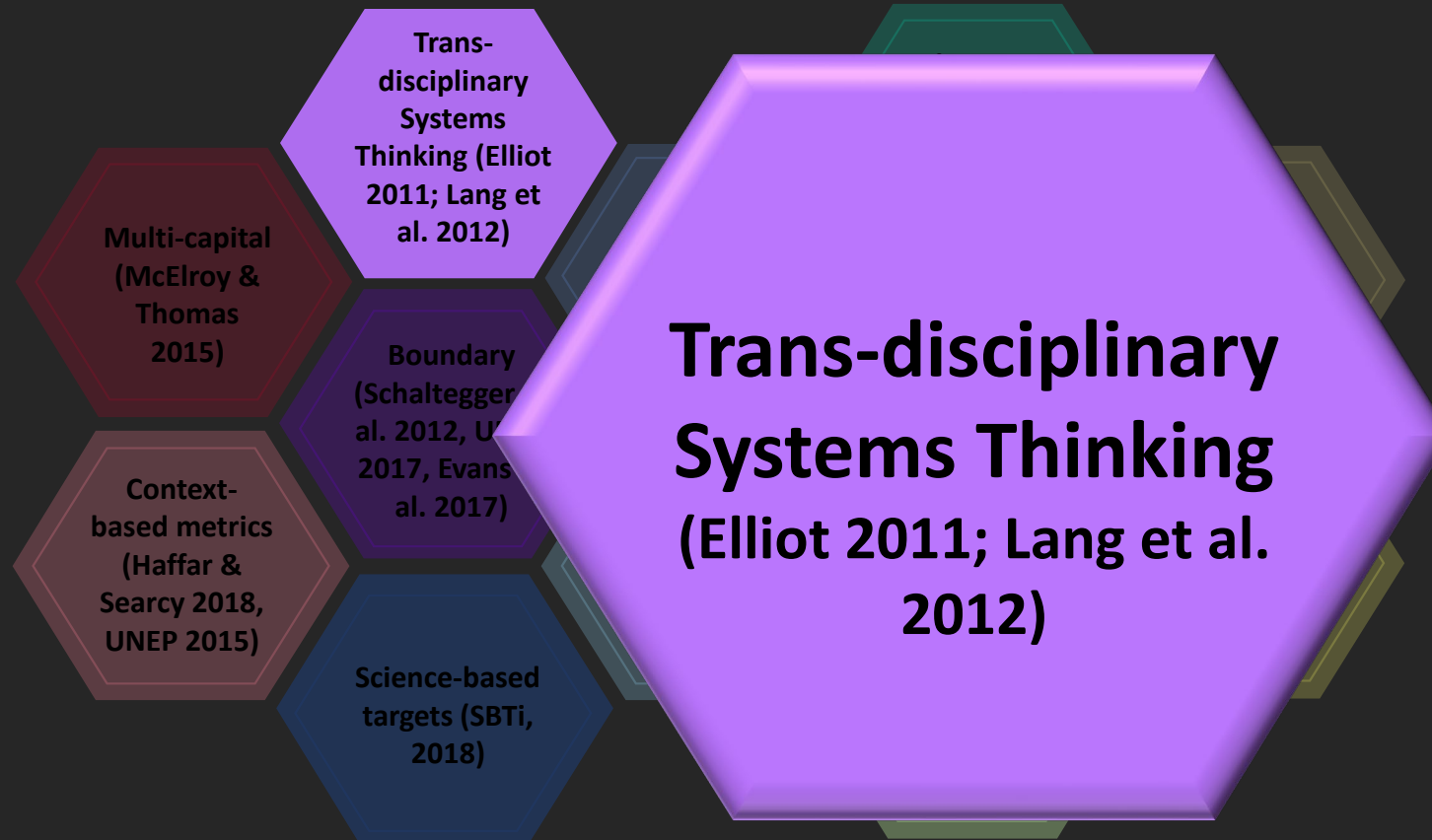
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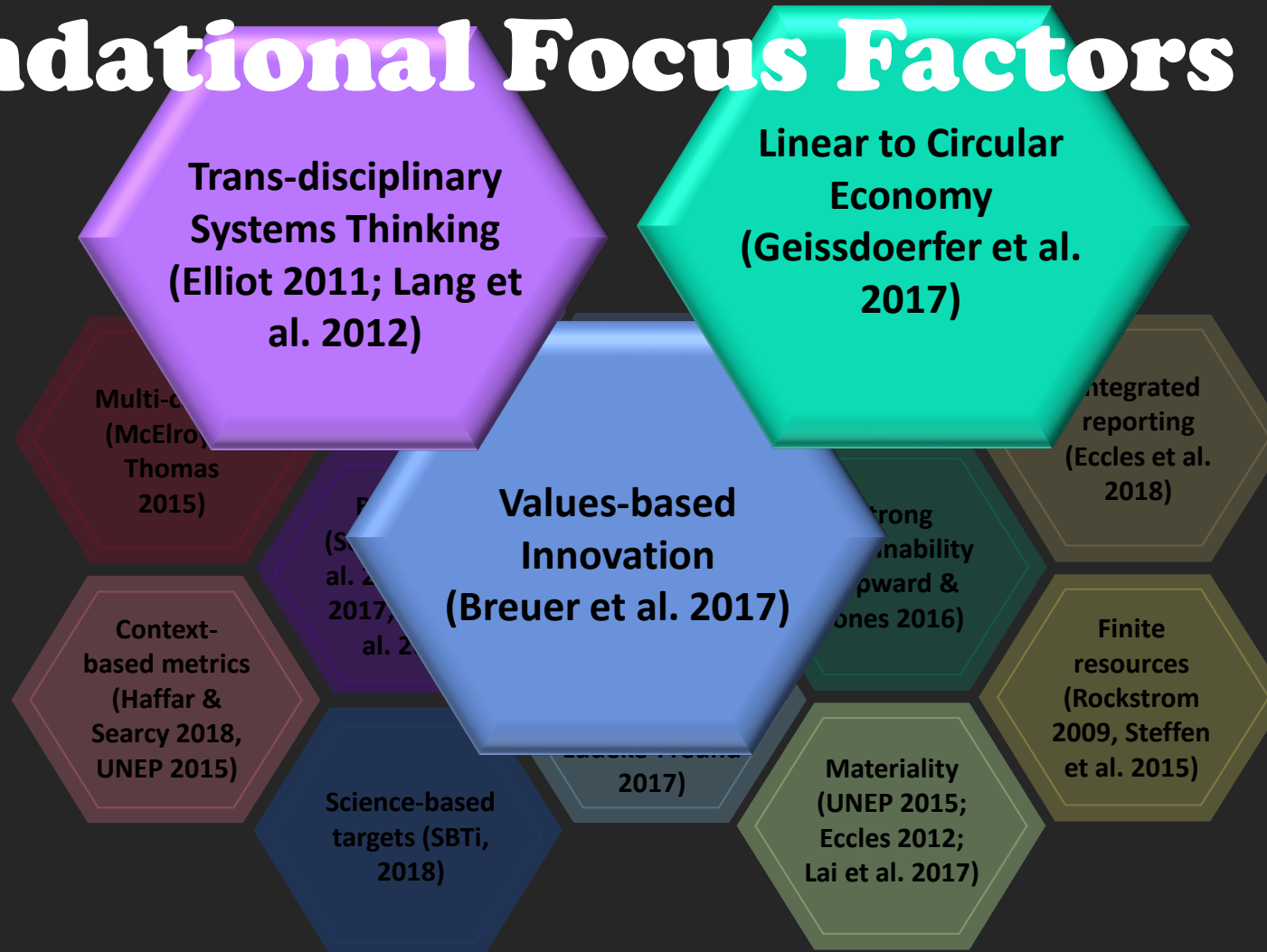
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Foundational Focus Factors



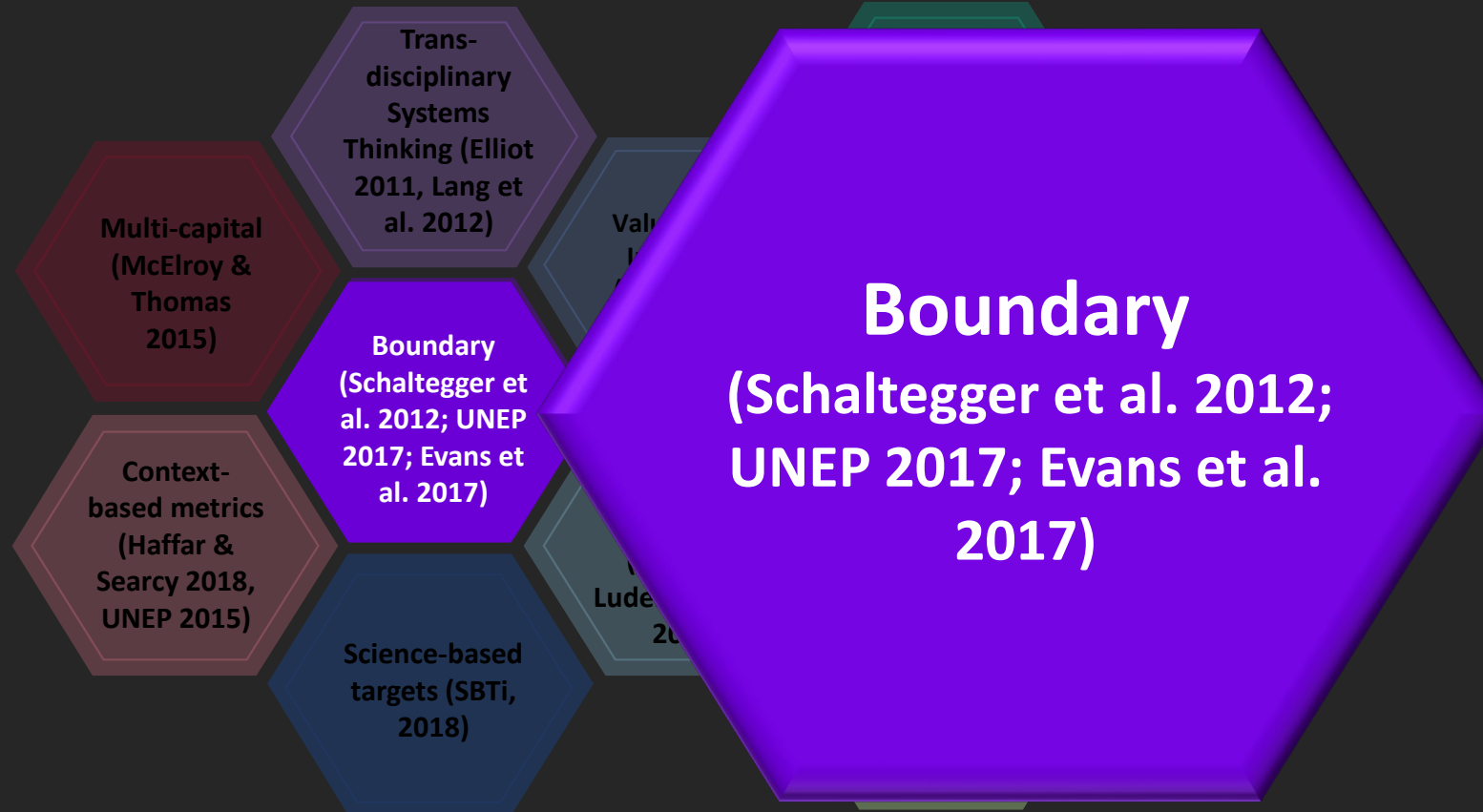
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Foundational Focus Factors



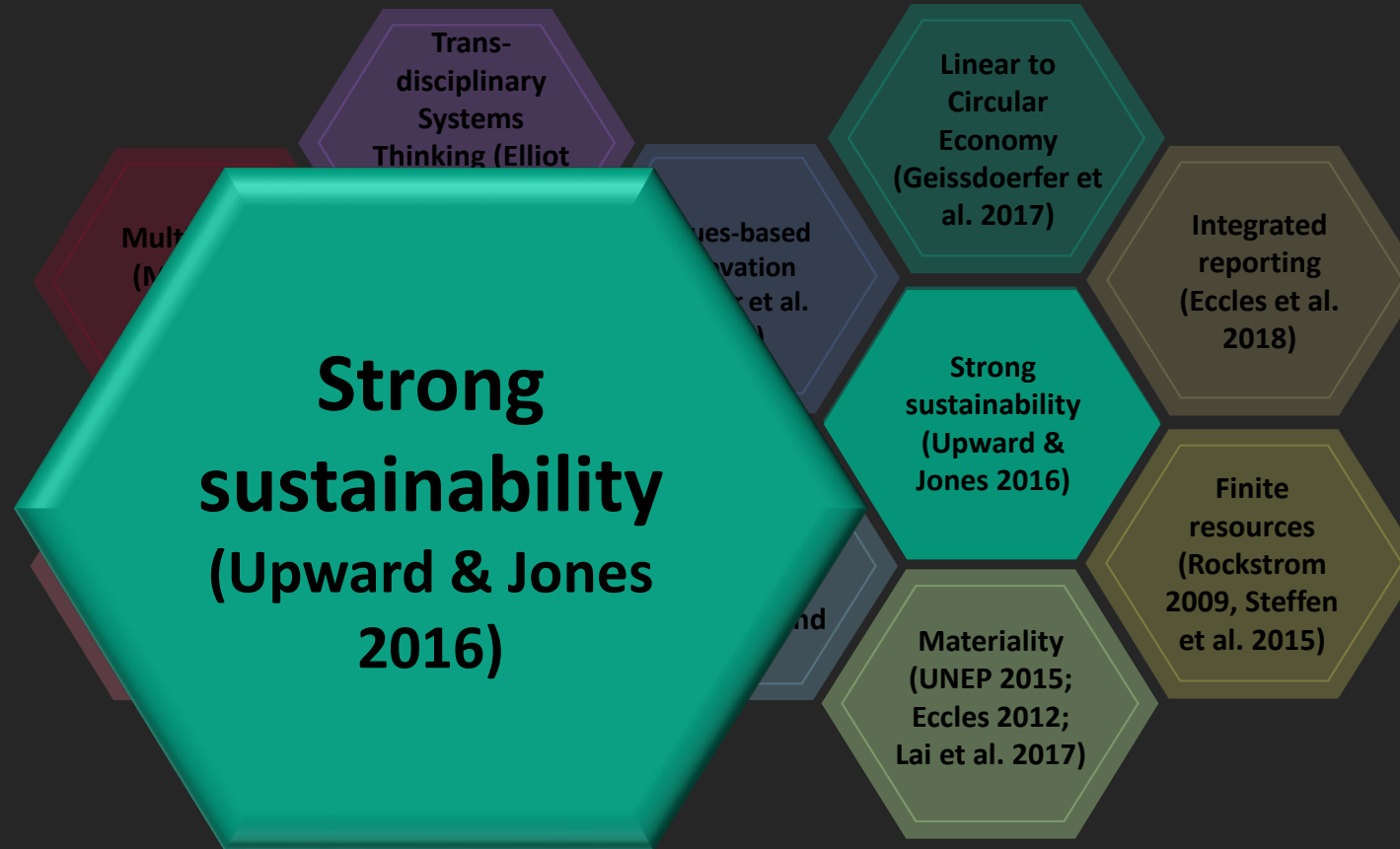
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Foundational Focus Factors



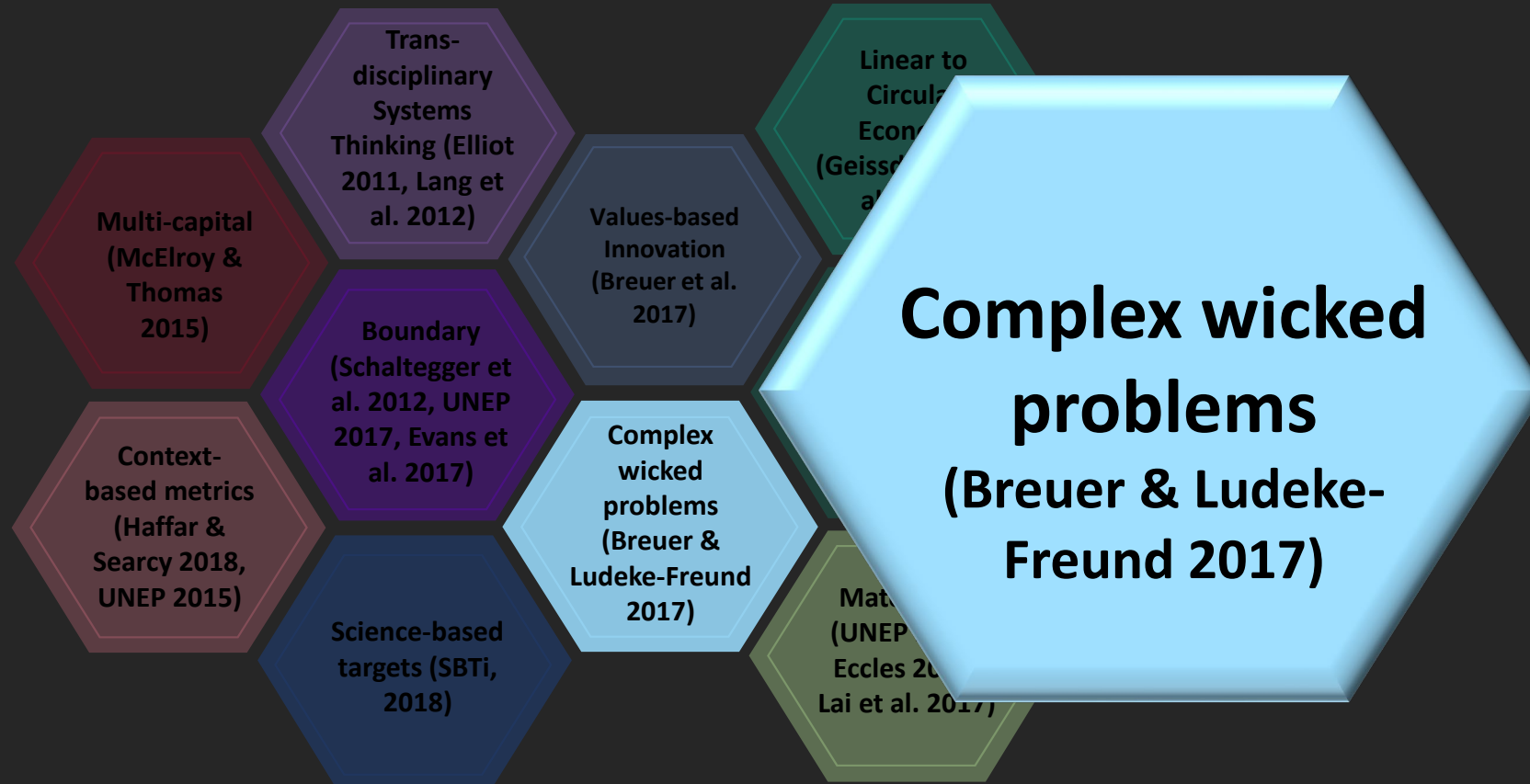
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Foundational Focus Factors



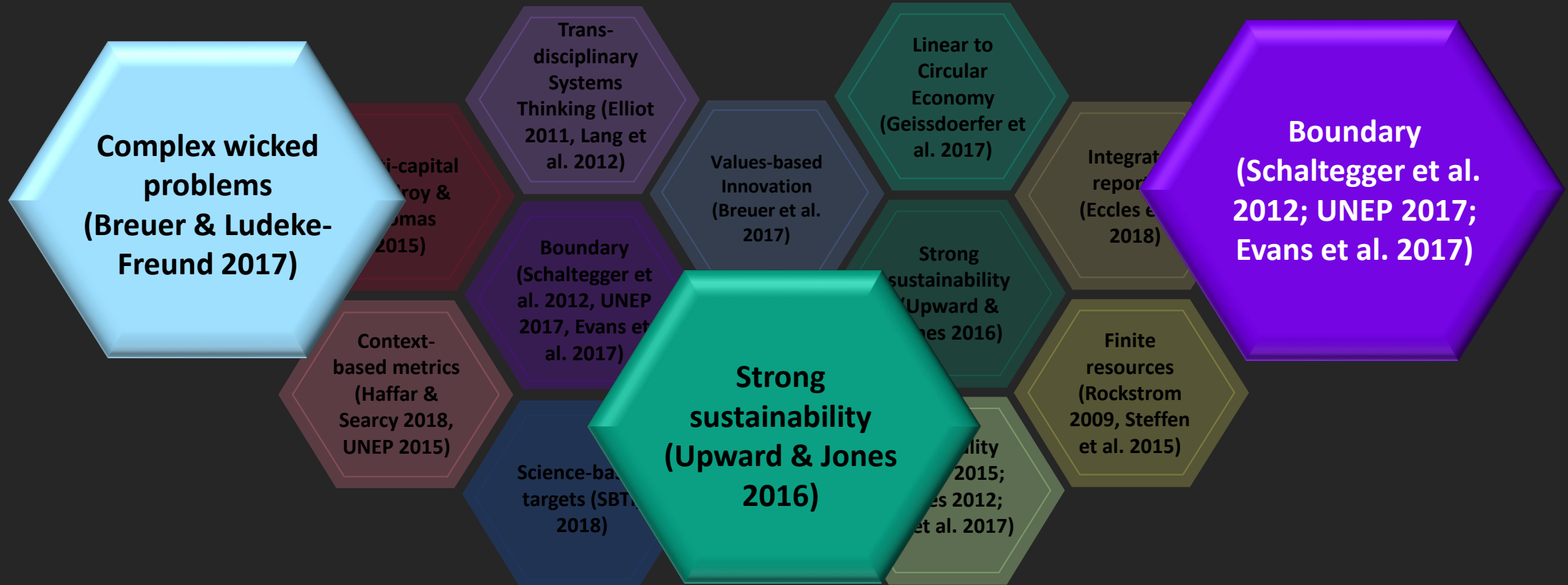
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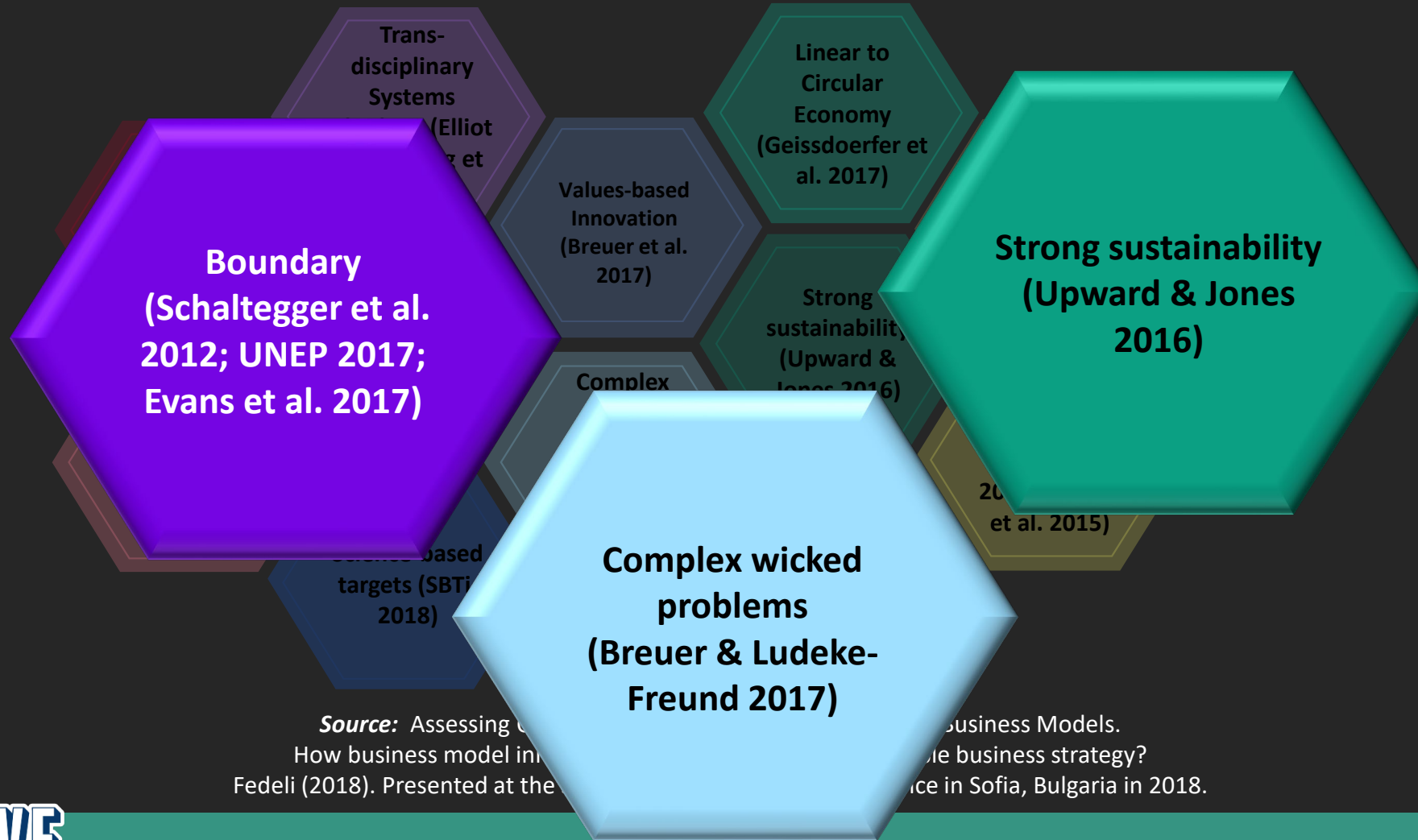
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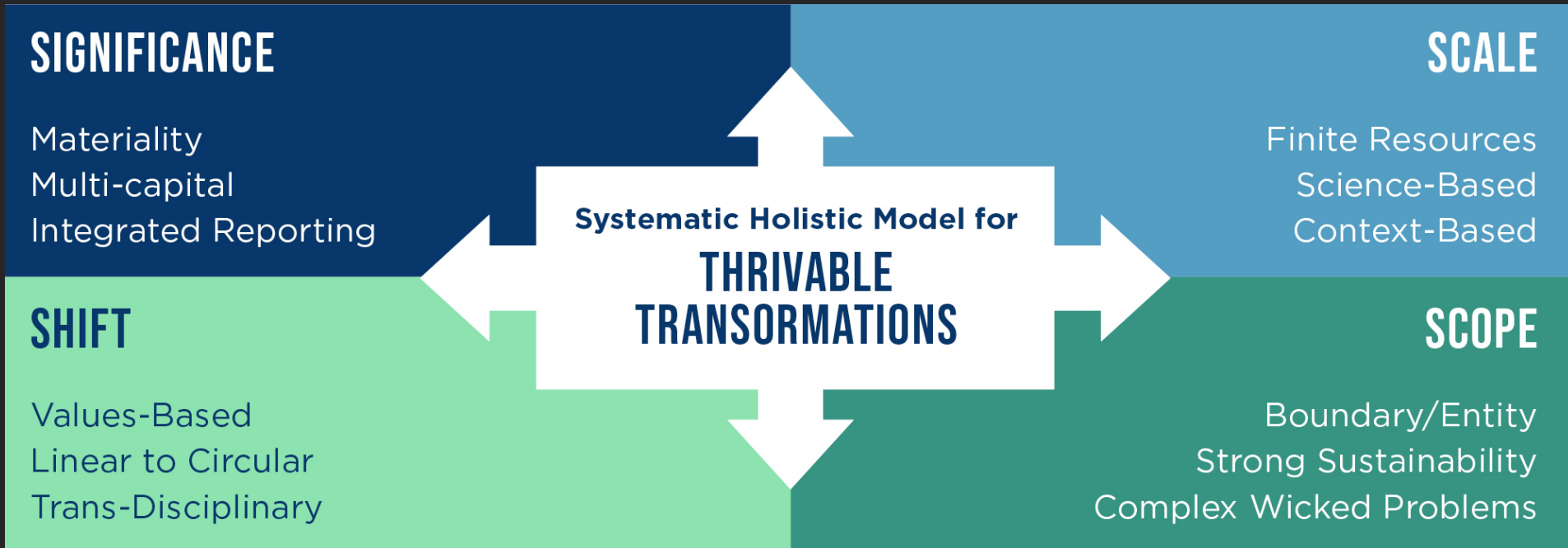


Foundational Focus Factors



Source: Assessing the Impact of Business Models. How business model innovation can contribute to the business strategy? Fedeli (2018). Presented at the conference on Business Models for a Sustainable Future in Sofia, Bulgaria in 2018.

Systemic Holistic Model



Source: Foundational Focus Factors For Strong Sustainability Using Information Systems: The Trajectory Towards Thrivable Transformations, Fedeli & Shrestha (2020).



Ciambella Chart



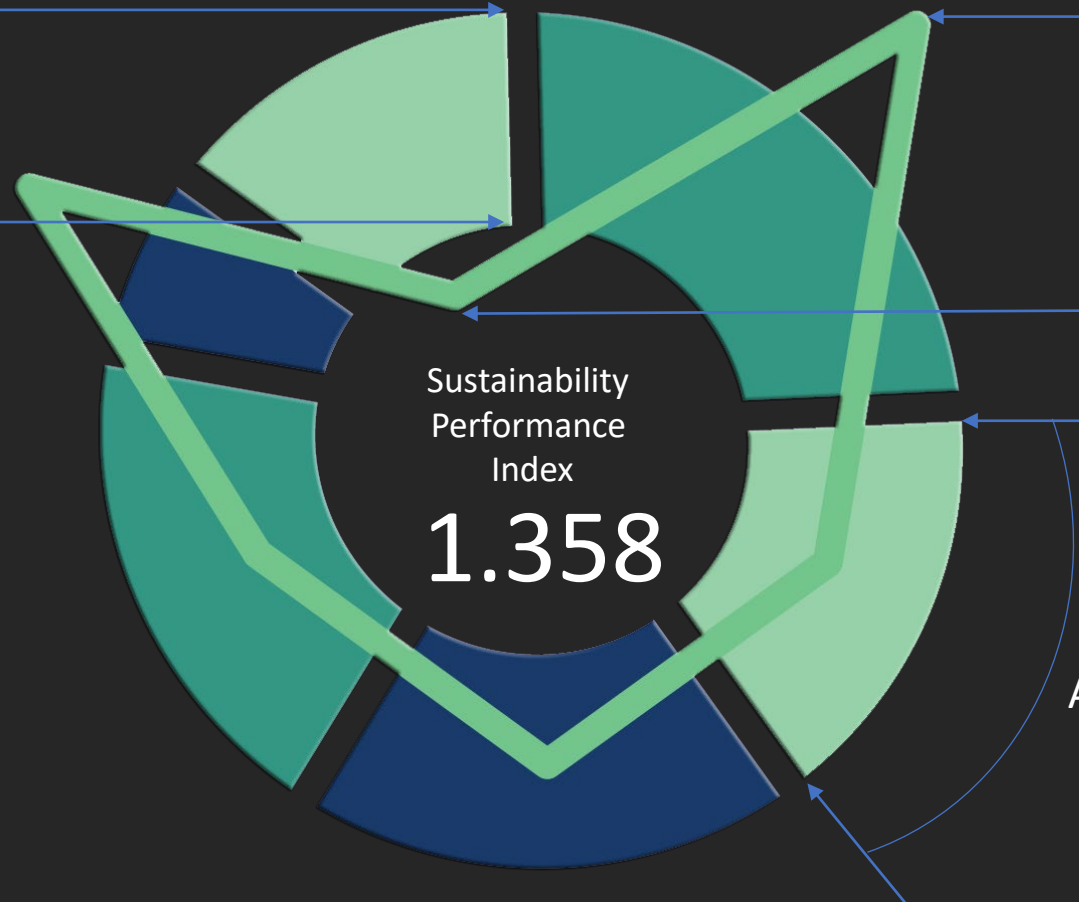
- Date Range
- Formula
- Weight
- Topic Selection
- Chart Type

Outer Limit

Inner Limit

Impact

Impact



Entity Model and Strategy Linking

The SodaStream System

The SodaStream system was designed to provide an **environmentally conscious** alternative beverage. The business model is centered on the premise of a circular **reuse** system, to **reduce the number** of canned and plastic bottles needed to enjoy sparkling water.

Our circular network is designed to be **closed loop**, where the usual flow follows the circular flow picture below.

As illustrated, our cylinders are purchased from our **retail partners** and our **customers** enjoy sparkling beverages at home. When the cylinder runs out of gas, our customers can use our user-friendly procedure to identify the most convenient location to **refill** the **used** cylinder for a **fully refilled** cylinder with CO₂. The used cylinders are **returned** to retailers to SodaStream. In **Mississippi**, users have the cylinders processed to SodaStream's quality center to be **refilled and returned** with CO₂. The refilled cylinders then begin the journey again from retailer to customer.

For cylinders that do not pass **quality control** or are determined to be older than five years, they are sent on to our manufacturing plant for **refurbishment**. From this point our cylinders are either refurbished and refilled and returned to the **retailer** or **recycled**. If the cylinder is damaged, the metal components are recycled into **steel products**. The network of the SodaStream business essentially scales on the 3R's: we reduce the number of plastic and canned beverage bottles by using sparkling water and soda at home, our cylinders are virtually infinitely reusable to continue to provide the bubble, and when the cylinders **reach the end of their life**, they are 100% recycled back into raw materials.

REDUCE REUSE RECYCLE

SodaStream CO₂ cylinders are infinitely reusable and represent a tremendous **reuse reduction** initiative.

The SodaStream **reuse** and carbonation system has the added reduction benefit of reducing up to an aluminum can, glass, and PET bottles.

For example, a customer who uses four SodaStream CO₂ cylinders a year may reduce the need for up to 240 canned bottles of store-bought carbonated beverages per year.

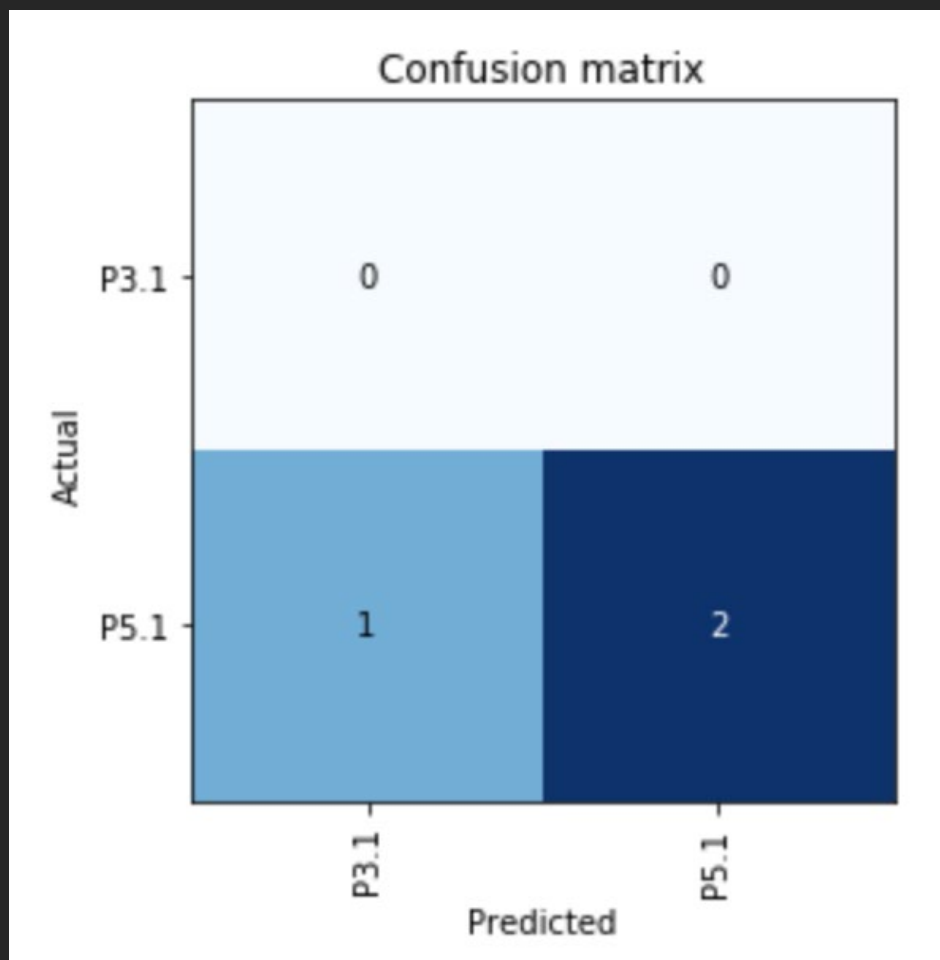
In 2018, SodaStream began construction of a new gas filling plant in Mississippi. When the facility opens it will allow empty cylinders to be **refilled and sent back** to customers in one consolidated facility. This will reduce truck trips and the generation of transport packaging starting in 2019.

The signature of the SodaStream system is the **reuse** of the CO₂ cylinder. **Reducing the number** of reused cylinders is the core of SodaStream's business.

SodaStream has made significant investments in the **refilling, testing and** refilling of their CO₂ cylinders. Including the development and use of the multi-rip boxes (MTRB) for transporting cylinders and a first-of-its-kind **refilling system** from **retail collection**.

The SodaStream system is designed to refill one hundred percent of their cylinders.

In addition to removing cylinders that do not pass quality control when being refilled, each SodaStream CO₂ cylinder has a gas cap that may be the final value of the cylinder, which ensures that cylinders are regularly **refilled from the start** every five years for testing. When the cylinders themselves are fit for reuse but the brass valve requires **refilling** of the SodaStream CO₂ cylinders, have reached the **end of their life**, they are recycled into raw aluminum and brass.



Classification Report

Logistic Regression 0.95

	precision	recall	f1-score	support
P3.1	0.91	1.00	0.95	10
P5.1	1.00	0.90	0.95	10
accuracy			0.95	20
macro avg	0.95	0.95	0.95	20
weighted avg	0.95	0.95	0.95	20

Confusion Matrix

	Predicted P3.1	Predicted P5.1
is_P3.1	10	0
is_P5.1	1	9

Classification Report

Decision Tree Classifier 0.65

	precision	recall	f1-score	support
P3.1	0.59	1.00	0.74	10
P5.1	1.00	0.30	0.46	10
accuracy			0.65	20
macro avg	0.79	0.65	0.60	20
weighted avg	0.79	0.65	0.60	20

Confusion Matrix

	Predicted P3.1	Predicted P5.1
is_P3.1	9	1
is_P5.1	2	8

Source: The Classification of Sustainable Business Model Patterns using Machine Learning, Fedeli & Lüdeke-Freund (2020).



THRIVE Platform v2.0



Sustainability Performance Scorecard

THRIVE Platform features the Sustainability Performance Scorecard tool which allows entities such as enterprises, portfolios, or cities to identify their performance at various scales, within context and relative to their peers. Users such as consumers may manipulate engine weights and controls in the dashboard and see the corresponding effects on entities visualized through charts and maps.



Contextualized

Supports global thresholds, ceilings and floors, and allocations.



Reports

Report dissections include by material topic, enterprise, portfolio, region, industry or year-on-year.



Integrated

Integrates with a range of public audited reports and trusted databases.



Visualizations

Instant visuals dissected by chosen category displayed as a range of charts and maps.

Seafood Industry



Seafood Stewardship Index

Dashboard filters : 2 - Enterprise (Company) | WSSI | 01/12/2019 | 01/12/2019 | FE06 - Seafood Stewardship Method (Enterprise) | WF00 - Default Weight

Choose level* 2 - Enterprise (Company) Choose classification* WSSI Start Date* 01/12/2019 End Date* 01/12/2019 Rank 1 of 30

Choose formula engine* FE06 - Seafood Stewardship Method Choose weight engine* WF00 - Default Weight Choose the entity Score 0.251

SEARCH + NEW SEARCH COMPARE

Table

PRESET 30 topics selected <<Double-click on weight cell to change the value>> Rank: 1 of 30 | Score: 0.251

Weight	Topic	Classification	Allocation	Inner Limit	Outer Limit	Impact	SPi
1.000	BIOM - BioMar Group	WSSI	0.000	0.000	0.000		2.218
1.000	BKK: CPF - Charoen Pokphand Fo...	WSSI	0.000	0.000	0.000		2.317
1.000	BKK: TU - Thai Union Group	WSSI	0.000	0.000	0.000		2.698
1.000	BME: PVA - Nueva Pescanova	WSSI	0.000	0.000	0.000		2.039
1.000	BUMB - Bumble Bee Foods	WSSI	0.000	0.000	0.000		1.272
1.000	CARG - Cargill Aqua Nutrition	WSSI	0.000	0.000	0.000		1.872
1.000	COOK - Cooke	WSSI	0.000	0.000	0.000		0.406
1.000	FCFC - FCF Co., LTD.	WSSI	0.000	0.000	0.000		1.527



Seafood Stewardship Index

Dashboard filters : 2 - Enterprise (Company) | WSSI | 01/12/2019 | 01/12/2019 | FE06 - Seafood Stewardship Method (Enterprise) | WF00 - Default Weight

Choose level* 2 - Enterprise (Company) Choose classification* WSSI Start Date* 01/12/2019 End Date* 01/12/2019 Rank 1 of 30

Choose formula engine* FE06 - Seafood Stewardship Meth Choose weight engine* WF00 - Default Weight Choose the entity BKK: TU - Thai Union Group X Score 2.698

SEARCH NEW SEARCH COMPARE

Table

PRESET 60 topics selected <<Double-click on weight cell to change the value>> Rank: 1 of 30 | Score: 2.698

<input checked="" type="checkbox"/>	Weight	Topic	Classification	Allocation	Inner Limit	Outer Limit	Impact	SPi
<input checked="" type="checkbox"/>	1.000	Sustainability strategy	WSSI A.I.1	0.200	5.000	0.000	5.000	0.500
<input checked="" type="checkbox"/>	1.000	Governance and accountability	WSSI A.I.2	0.200	5.000	0.000	5.000	0.500
<input checked="" type="checkbox"/>	1.000	Public reporting on sustainability	WSSI A.II.1	0.300	5.000	0.000	5.000	0.750
<input checked="" type="checkbox"/>	1.000	Disclosure of stakeholder engage...	WSSI A.II.2	0.300	5.000	0.000	5.000	0.750
<input checked="" type="checkbox"/>	1.000	Implementation of sustainability ...	WSSI A.III.1	0.500	5.000	0.000	5.000	0.833
<input checked="" type="checkbox"/>	1.000	Stakeholder engagement	WSSI A.III.2	0.500	5.000	0.000	5.000	0.833
<input checked="" type="checkbox"/>	1.000	Engagement for policy advocacy	WSSI A.III.3	0.500	5.000	0.000	2.500	0.417
<input checked="" type="checkbox"/>	1.000	Traceability of origins	WSSI B.I.1	0.200	5.000	0.000	3.500	0.350



Seafood Industry – Thai Union



Thank You

- Register for free
- Book a Guided Tour
- Collaborate and co-develop
- Web:
<http://www.strive2thrive.earth>
- Email:
hello@strive2thrive.earth



Measuring What Matters Most



APPENDIX

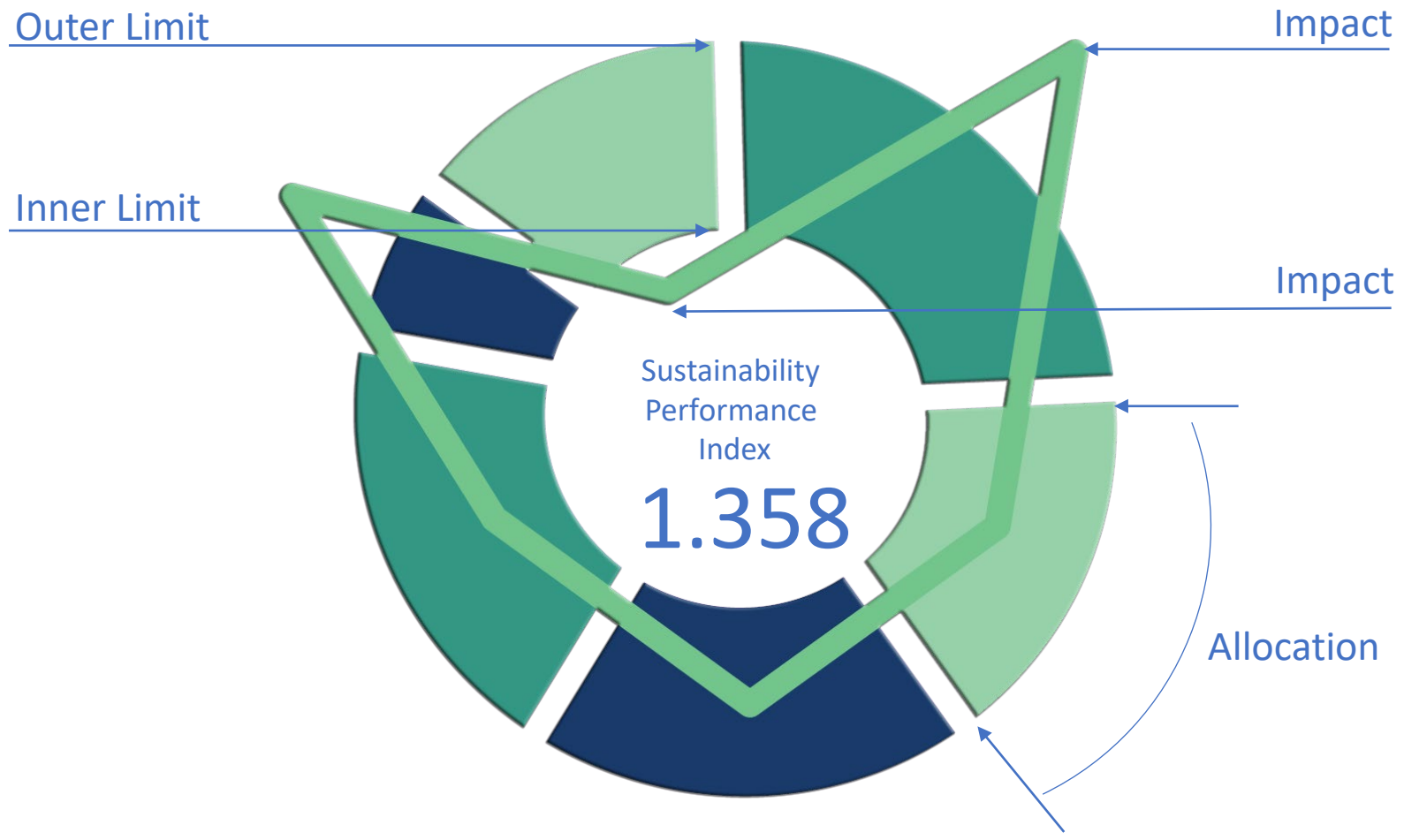
Supplemental Materials

Ciambella Chart

Android App



- Date Range
- Formula
- Weight
- Topic Selection
- Chart Type



THRIVE Platform Dashboard

Entity Level
(Scale-linked levels 1-7)

Classification System
(e.g., SDGs, GRIs, Custom)

Dashboard HUD
with summary of chosen factors

Date range
(Start date, End date)
Rank
(based on SPI)

Dashboard filters : 2 - Enterprise (Company) | WSSI | 01/12/2019 | 01/12/2019 | FE06 - Seafood Stewardship Method (Enterprise) | WF00 - Default Weight

Choose level* 2 - Enterprise (Company)	Choose classification* WSSI	Start Date* 01/12/2019	End Date* 01/12/2019	Rank 1 of 30
Choose formula engine* FE06 - Seafood Stewardship Meth	Choose weight engine* WF00 - Default Weight	Choose the entity BKK: TU - Thai Union Group		Score 2.698

SEARCH + NEW SEARCH COMPARE

Formula Engine
(e.g., MPI, GM, etc)

Weight Engine
(e.g., WF00, WF01, etc)

Open a new tab and initiate a new search

Compare between search results / tabs

Score: Sustainability Performance Index (SP_i)

Entity being evaluated
(blank for all)

Search database for all records matching dashboard filters



THRIVE Platform Results - Table

Comparative searches

Dashboard HUD with summary of chosen factors

Rank & Score

HOME SEARCH 1 SEARCH 2 SEARCH 3 SEARCH 4

Dashboard filters : 2 - Enterprise (Company) | WSSI | 01/12/2019 | 01/12/2019 | FE06 - Seafood Stewardship Method (Enterprise) | WF00 - Default Weight

Table

PRESET 60 topics selected <<Double-click on weight cell to change the value>>

Rank: 1 of 30 | Score: 2.698

<input checked="" type="checkbox"/>	Weight	Topic	Classification	Allocation	Inner Limit	Outer Limit	Impact	SPI
<input checked="" type="checkbox"/>	1.000	Sustainability strategy	WSSI A.I.1	0.200	5.000	0.000	5.000	0.500
<input checked="" type="checkbox"/>	1.000	Governance and accountability	WSSI A.I.2	0.200	5.000	0.000	5.000	0.500
<input checked="" type="checkbox"/>	1.000	Public reporting on sustainability	WSSI A.II.1	0.300	5.000	0.000	5.000	0.750
<input checked="" type="checkbox"/>	1.000	Disclosure of stakeholder engage...	WSSI A.II.2	0.300	5.000	0.000	5.000	0.750

Weights

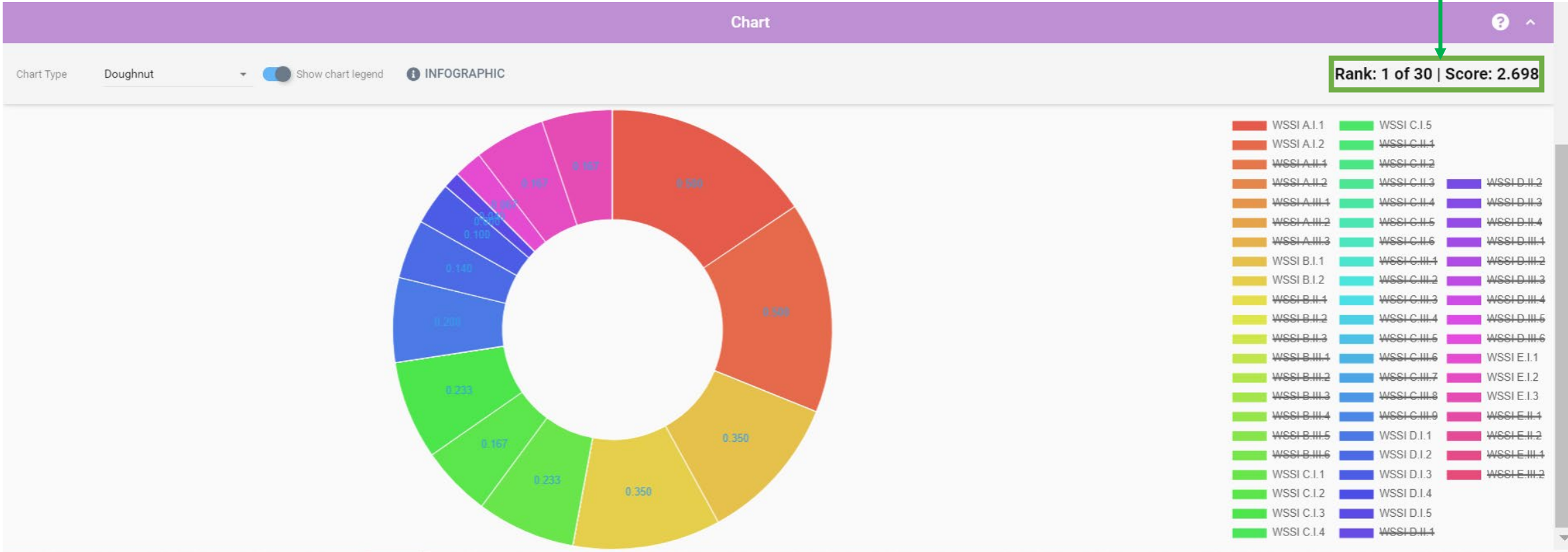
Choice of topics / presets
(transparency, ecosystems, governance, Top 10)

For each material topic we have allocation, inner and outer limits, impact and SPI



THRIVE Platform Results - Chart

Rank & Score



THRIVE Platform – Business Model Patterns

Model ×				
ID	Name	Group	Content	Source
P5.1	Green Supply Chain Management	Supply Chain Patterns	There is growing pressure on companies to be more transparent and efficient, e.g. in terms of using natural resources and avoiding risks and harms to their supply chain partners and customers.	Bisgaard et al., 2012
P3.2	Maximise material productivity and energy efficiency	Ecodesign Patterns	Because of increasing threats to human health and natural ecosystems there is a growing need of reducing the use of finite resources and diminishing waste and pollution.	Bocken et al., 2014