

# A Unified Framework for Classification of Business Model Transformations of Established Firms

Dr. Dror Yeger<sup>1</sup>  
Dr. Aaron J. Shenhar<sup>2</sup>

<sup>1</sup>Entrepreneur, researcher, consultant and a lecturer in several faculties including Design, Industrial engineering and Business Administration

<sup>2</sup>Professor of Project and Technology Management, Rutgers University (Retired)"

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## Abstract

This study presents a framework for assessing and classifying Business Model Transformation (BMT) of established firms. Using Teece's definition of interlinked BM dimensions, we propose a diamond model to describe a change in a given firm's BM based on the following four dimensions: Target market; Value Proposition; Value Delivery and Value Capture. The extent of change on each dimension is quantified as No change, Medium change and High change. Aggregating change on all dimensions enables classifying a specific BMT as Incremental, Semi-Radical, or Radical. Such modeling may provide better insights into the nature of a firms' transformation.

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## Introduction

As defined by Govindarajan & Trimble (2005) and Aspara et al. (2011), Business Model Transformation (BMT) deals with *established companies' transformation their existing BM to achieve strategic renewal*. BMT has been identified as an important research issue (Lambert and Davidson, 2012), however, its current research base was

characterized as somewhat scant (Frankenberger et al., 2013).

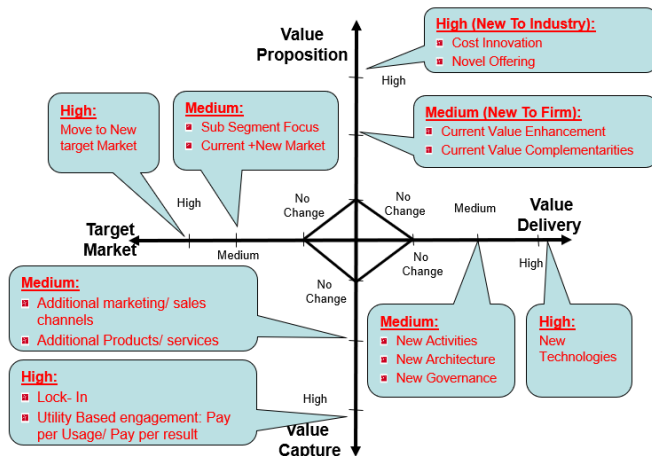
In this paper, we propose a four-dimensional model to describe a given firm BMT. The basis for the model is Teece's (2010) definition of BM as "*the architecture of the firm's value creation, delivery and capture*

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Keywords:

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*mechanisms*". Thus, the basis for our model identifies change in (1) Target Market; (2) Value Proposition; (3) Value Delivery and (4) Value Capture. Similar dimensions have been proposed by Baden-Fuller & Haefliger (2013); Baden-Fuller & Mangematin (2013) and Frankenberger et al. (2013). Each dimension is quantified by three elements using a **Risk/ Reward Hierarchy** (Christensen & Bower, 1996; Merton, 2013): No change, Medium change, and High change.

**Dimension 1: Change in Target Market** - Target market is a key component in most BM constructs and frameworks (Chesbrough, 2010; Osterwalder and Pigneur, 2010; Teece, 2010): **No Change:** Stay with current target market; **Medium Change:** Focus on a sub-segment of current market (Porter, 1985) or simultaneously stay with current market and approach a new market segment. Example: Dell approaching SMB in addition to consumers; **High Change:** Leave existing market for a completely new market Example: Motorola exits the mobile phone consumer market and focuses on the public communication market (rebranding itself as "Motorola Solutions").

**Dimension 2: Change in Value Proposition**- describes the values (or benefits) the firms create for customers (Priem, 2007; Kim & Mauborgne, 2005): **No Change:** Stay with current value proposition; **Medium Change:** Current Value enhancement - Better performance on already known industry metrics (Rigby et al., 2002; Christensen, 2003) Examples: Samsung offering higher battery time in its smartphone; Dell offering higher processing capabilities for its laptops etc.; **or** Current Value complementarities - Additional adjacent values that offered/bundled with current products or services

(McGrath and MacMillan, 2005; Zott and Amit, 2010) **Examples:** Apple offering the ITUNES store in addition to its media player; Ebay providing secure financial transactions service etc.' ; **High Change:** Cost innovation - Changing current value proposition to be based on extremely low price compared to the firm's industry (Christensen, 2006; Williamson, 2010) **Examples:** P&G low cost electric toothbrush (spinbrush); Haier low cost wine-storage refrigerators; **or** Novel Offering - Changing current value proposition to be based on an offering totally new compared to the firm's industry (Kim and Mauborgne, 2000; McGrath & MacMillan, 2005; Foss and Saebi 2017) Sony transistor radio, Cirque de Soliel , Yellow tail wine .

**Dimension 3: Change in Value Delivery-** defined as "The linked set of value-creating activities all the way through from basic raw material sources for component suppliers to the ultimate end-use product delivered into the final consumer's hands" (Govindarajan & Gupta, 2001): **No Change:** Stay with current value delivery activities; **Medium Change:** New activities, Architecture or Governance (Zott and Amit, 2010). **Examples:** New activities -Toyota Just in Time; GE Six-Sigma; New Architecture- Walmart cross docking process, Zara's ability to develop a new product and deliver it to stores in just two weeks (Vs. 6 month), New Governance- NIKEID and FIAT 500- self designed shoes/cars, Ikea- Do it Yourself (DIY) ; **High Change:** Developing/Implementing new technologies compared to the firm's industry (Christensen, 1997; Utterback,1996; Anderson & Tushman,1990) **Examples:** Airbus A380, Apple touch screen technology, Microsoft Kinetic etc.'

**Dimension 4: Change in Value capture-** defined as "a set of strategies that enable capturing as much as possible portion of value appropriated by the firm itself, in the form of profits, rather than by other chain members or competitors" (Bowman & Ambrosini, 2000; Makadok & Coff, 2002; Aspara & Tikkanen, 2012). **No Change:** Stay with current value capture activities; **Medium Change:** Adding additional marketing/sales channels (Sabatier et al., 2010); or selling additional products/services based on current activity (McGrath and MacMillan, 2005). **Examples:** Amazon affiliate marketing, Edmunds selling its data base to third parties, Victoria Secret selling classical music CD; **High Change:** Adding activities that create high incentives for customers

initial engagement ,e.g. “Bait”, bundled with activities to “lock” customers, e.g. “Hook” (Zott and Amit, 2010; Osterwalder and Pigneur, 2010); **or** a Utility-Based Engagement e.g. Pay per usage (Desyllas and Sako 2013) or Pay per result (Ding & Yip,2013; McGrath & MacMillan 2005). **Examples:** Bait and hook- Nespresso capsule, HP Inkjet. Utility-Based Engagement-Rolls-Royce engines “Power by the Hour<sup>®</sup>, consulting firm Fahrenheit 212 -‘outcome-obsessed, outcome-paid’ business model , Google’s “pay per click”.

Designing or identifying factors for customer lock-in mechanism are rather rare and might even daunt potential customers and partners as was the case with Better Place the Electric Vehicles company (Christensen et al 2012; LeVine 2013). Utility-based engagement involves an inherited risk of not reaching the desired performance and thus not being paid. Hence their position under **High Change**.

## Approach

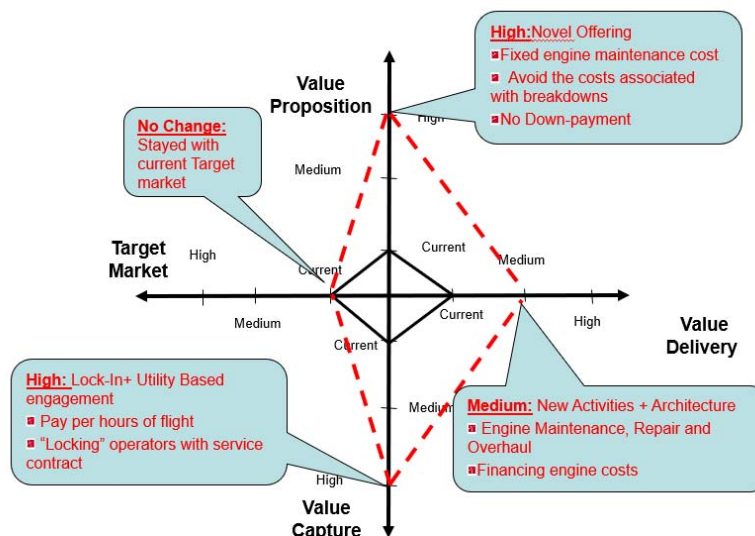
In order to test and verify the BMTF, we studied seven firms that underwent BMT. The study involved 14

interviews and supplemental material. Firms were chosen based on the following criteria: 1) A Small/Medium size technology company which transformed its BM; 2) Two executives who were involved in the BMT agreed to a face-to-face interview; 3) The BMT outcome was successful (a successful BMT had produced new revenues streams and defined by its managers as successful). The data was then verified and triangulated with additional data sources (Leedy and Ormrod 2010, Yin 2009). Several modifications and refinements of the BMTF were then added.

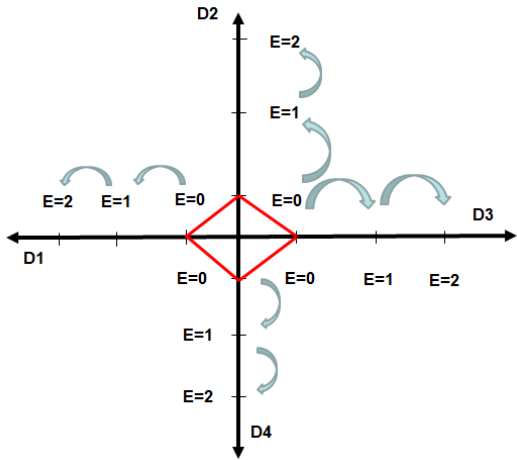
## Key Insights

According to Foss and Saebi (2017), Teece’s notion of “architecture” relates to mapping the functional relations among dimensions and their underlying activities. In other words, all dimensions should be seen as one construct, linked by the firm’s architecture, we propose that by charting a given firm BMT on the framework, one can conceptualize and measure the extent of a given BMT by a higher level of abstraction and granularity. Here is a common example from the BM literature:

**Example: Rolls-Royce PLC**  
 Rolls-Royce transformed its BM in the 1980s: Instead of selling aircraft engines and spare parts to operators they “gave the engine for free,” and for a fixed sum per flying hour, provided a complete engine and accessory replacement service. “The key feature was to provide operators with fixed engine maintenance costs over an extended period of time. Operators were assured accurate cost projections and avoided unpredictable breakdown costs associated” Cohen and Netessine, 2010. Rolls-Royce, (1) Stayed within its current market; (2) Created a novel offering; (3) Devised a complicated architecture and activities to deliver the novel offering and; (4) Engaged the market on a pay per usage basis.



**Defining three levels of transformation: Incremental, Semi-Radical, Radical BMT**



Several researchers suggested that one can measure BMT through the degree of change in the BM building blocks (Amit and Zott 2001, Osterwalder et al. 2005) or the number of building blocks that have been changed simultaneously (Skarzynski and Gibson 2008). Accordingly, the proposed model can measure transformation per dimensions (D1, D2, D3, D4) and/or their group of elements (E0, E1, E2). We define **(E)** as number of **Elements** changed on any dimension with a value range of **(0 ≤ E ≤ 2)**; We define **(D)** as the number of **Dimensions** on which change has been realized with a value range of **(1 ≤ D ≤ 4)**; We can now calculate **Total Change (TC)** with a value range of **1 ≤ Σ(TC) ≤ 8**.

Dimensions /Elements	E0	E1	E2
D1	0	Σ(TC) = 1	Σ(TC) = 2
D2	Σ(TC) = 2	Σ(TC) = 3	Σ(TC) = 4
D3	Σ(TC) = 4	Σ(TC) = 5	Σ(TC) = 6
D4	Σ(TC) = 6	Σ(TC) = 7	Σ(TC) = 8

Factoring both Elements and Dimensions allows us to construct a three-level scale for ranking **TC**: Incremental=  $1 \leq \Sigma(TC) \leq 2$ , Semi-Radical=  $3 \leq \Sigma(TC) \leq 5$  and Radical=  $6 \leq \Sigma(TC) \leq 8$ . As reflected on the BMTF, one can conclude that Rolls-Royce realized a **Semi-Radical BMT** since their TC = 5.

**Discussion and Conclusions**

As BMT research evolves, we hope this work would contribute to better defining and quantifying this phenomena. By moving beyond generic typologies, a greater level of abstraction and a higher degree of granularity is proposed, hopefully providing a new way to operationalize and measure BMT. From a practitioner standpoint, since every industry/sector eventually declines, in order to survive, firms need to constantly reinvent themselves and their business model. Hopefully, this work will inspire other researchers and practitioners to further contribute to BMT research resulting in the creation of better tools, knowledge and consequently help more firms to achieve superior business results.

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