



# Engaging a product-focused sales force in solution selling: interplay of individual- and organizational-level conditions

Anna Salonen<sup>1</sup> · Harri Terho<sup>1</sup> · Eva Böhm<sup>2</sup> · Ari Virtanen<sup>3</sup> · Risto Rajala<sup>3</sup>

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## Abstract

This study explains how manufacturers tackle the critical managerial challenge of transforming a product-focused sales force to undertake solution selling. Through an application of configurational theory, the authors explain how individual and organizational conditions combine to determine salespeople's engagement in solution selling. Multilevel, multisource data from the sales organization of a global supplier of building solutions represent input from salespeople ( $N = 184$ ), solution champions ( $N = 23$ ), and sales managers ( $N = 26$ ). A fuzzy set qualitative comparative analysis reveals no single, optimal way to overcome transformation challenges. Rather, consistent with prior research, solution selling requires certain types of salespeople, because value-based selling is a necessary condition for successful engagement. Beyond this foundational condition, a heterogeneous sales force can be engaged, as long as the organization provides appropriate support that is tailored to individual salespersons' needs. The findings affirm that this viable support can come from either sales managers or solution champions.

**Keywords** Business-to-business marketing · Customer solutions · Sales force transformation · Sales management · fsQCA

## Introduction

The imperative to go “downstream” in the value chain is obvious for business-to-business (B2B) companies (Wise and Baumgartner 1999), which widely and frequently adopt a solution-based business approach to do so (Panagopoulos et al. 2017). A majority of *Fortune* 100 firms have pursued some kind of solution business strategy by increasing their service and solution offerings (Guido 2012; Ulaga and Kowalkowski 2017)—initiatives that demand active participation from sales forces (Panagopoulos et al. 2017; Reinartz and Ulaga 2008; Ulaga and Loveland 2014; Worm et al. 2017). Boundary-spanning salespeople are pivotal for crafting the solution offering and communicating its value-in-use to customers (Panagopoulos et al. 2017; Tuli et al. 2007). Yet most salespeople seemingly are reluctant to engage in solution

selling (Ulaga and Reinartz 2011), leading some authors to speculate that companies might need to replace large portions of their sales forces to achieve their transformation, even though doing so is costly and would disrupt existing business and sales routines (Reinartz and Ulaga 2008; Ulaga and Loveland 2014). In many cases, it is not even viable, such as when solution sales complement rather than replace product sales (Storbacka 2011). However, prior academic literature offers limited guidance for how to encourage product-oriented salespeople to engage with solution selling.

Against this background, a key managerial consideration is finding ways to engage sales forces in the transformation from product selling to solution selling. This complex transformational context might encompass multiple routes to success (Ahearne et al. 2010), so we adopt configuration theory to develop a conceptual framework that explains how a situational fit between transformation specific factors can encourage salesperson engagement in solution selling (Venkatraman 1989). We thus integrate configuration theory with prior findings pertaining to sales force transformations and solution selling to explain how various configurations of individual salesperson and organizational conditions might lead to greater salesperson engagement. For the empirical study, we rely on a long-term research collaboration with a European manufacturer of intelligent building solutions that, during our

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✉ Anna Salonen  
anna.k.salonen@utu.fi

<sup>1</sup> University of Turku, Turku, Finland

<sup>2</sup> TU Dortmund University, Dortmund, Germany

<sup>3</sup> Aalto University, Espoo, Finland

research period, was undergoing an organization-wide solution transformation process. We use multilevel, multisource empirical data to reflect and address both individual salesperson and organizational conditions, nested at three levels of the sales organization: salespersons, solution champions, and sales managers. Furthermore, we analyze these matched, triadic data using fuzzy set qualitative comparative analysis (fsQCA), a highly relevant method that can reveal explanatory combinations of conditions, such as those that explain salesperson engagement in solution selling (Fiss 2007; Ragin 2006). To frame the resulting insights, we establish two main research questions: (1) Which conditions effectively encourage an industrial sales force to engage in solution selling? (2) How do individual and organizational conditions combine to facilitate salespersons' engagement in solution selling?

In answering these questions, this study contributes to both personal selling and solution selling literature. First, the results advance understanding of effective implementations of sales force-wide planned changes in complex transformation contexts (Ahearne et al. 2010; Hartmann et al. 2018). Most prior sales force transformation studies seek to detail a clear set of specific, exclusive transformation drivers that lead to the desired outcomes when applied universally to sales forces (e.g., Hayati et al. 2018; Homburg et al. 2010; Hunter and Panagopoulos 2015; Johnson and Sohi 2017). However, Ahearne et al. (2010) suggest that salesperson transformation paths are idiosyncratic, because salespersons differ fundamentally in their ability to change. Thus, whether a sales force-wide planned change succeeds likely depends on the organization's ability to offer support that fits each salesperson's situational needs, in the given transformation context. We take this notion of idiosyncrasy as a starting point and affirm that sales force transformation is contingent on tailored organizational support, designed to match diverse salespersons' situational needs.

Second, we offer initial insights into the requirements for engaging salespersons in solution selling. Only a handful of prior solution studies even consider the roles and activities of salespeople during solution transformations (Koponen et al. 2019; Panagopoulos et al. 2017; Ulaga and Kohli 2018; Ulaga and Loveland 2014). Research has established that salespeople's solution selling involvement is vital, because it increases both their own and customers' performance (Panagopoulos et al. 2017), but the optimal tactics for ensuring salespeople's engagement in solution selling in the first place remain unclear. Our results suggest that engaging salespeople who previously were responsible for product selling in solution selling is possible—as long as each salesperson's specific threshold conditions, such as her or his ability to practice value-based selling, are identified and addressed (Terho et al. 2017). Furthermore, transforming firms must recognize that a one-size-fits-all approach is unlikely to facilitate engagement. Instead, they should develop and offer

support options that fit each salesperson's situational needs. Support might involve formal, management-led initiatives or take the form of support provided by so-called solution champions who engage in market-shaping activities on behalf of the selling firm (Baker et al. 2019; Nenonen et al. 2019; Storbacka and Nenonen 2011). These solution champions influence established ways of thinking and doing among actors in the institutional environment that surrounds the transformation to solution selling (Hartmann et al. 2018). Salespeople's risk perceptions also emerge as a core condition of solution selling engagement, with considerable impacts on an individual salesperson's need for comprehensive organizational support.

In the next section, we outline how we build on extant sales force transformation and solution selling literature to derive a set of conditions that might explain when and why salespeople engage with solution selling. Then we introduce and apply configuration theory to develop our conceptual framework, which reflects the notion that individual salesperson and organizational conditions combine to create situational fit and thus facilitate salesperson engagement in solution selling. In the methods section, we explain the specifics and application of fsQCA, detail the empirical study context, and present the operationalization of the study constructs. After outlining the results pertaining to the necessary and sufficient conditions for solution selling engagement, we discuss the theoretical and managerial implications of our findings and some options for further research.

## Sales force solution selling transformation

The phenomenon of a sales force solution selling transformation is remarkably complex. Two streams of research are primarily pertinent for understanding it. Sales force transformation research deals with the fundamental context, namely, managing sales force-wide planned changes. The solution selling literature helps establish how solution selling differs from product selling and the requirements that solutions demand during a sales force transformation. We present extant findings from these perspectives to identify gaps in knowledge, then introduce configurational thinking to establish our proposed conceptual framework.

## Sales force transformation research

Many studies consider sales force-wide planned change, yet the relevant knowledge remains fragmented across different types of transformation contexts and diverse theoretical perspectives. To gain an overview of research insights into the implementation of sales force-wide planned change (Ahearne et al. 2010), we carried out an extensive review of leading

general marketing (*JM*, *JMR*, *JAMS*), as well as B2B sales focused journals (*JPSSM*, *IMM*).<sup>1</sup>

We identified 26 studies that pertain to a sales force transformation and 4 studies discussing more general transformations within the selling discipline, as listed in Appendix Table 10. (Sales force transformation articles that focus specifically on solution selling are discussed in the next section.) The summary review in Appendix Table 10 serves two purposes. First, it reveals some key conditions that affect complex sales force transformations. Second, it demonstrates the dominant focus in prior research on uniform rather than heterogeneous transformations, which suggest the potential benefits of configurational thinking for understanding effective implementations of sales force transformations.

Regarding relevant transformation conditions, the review indicates the need to understand *unique drivers of change in specific transformation contexts*. Business markets are characterized by fundamental shifts, related to sales strategies, technologies, and customer expectations, all of which impose notable pressures on B2B firms to respond with planned change initiatives (Cuevas 2018; Hartmann et al. 2018; Sheth and Sharma 2008; Wotruba 1996). Sales force transformation research investigates change management efforts in three main transformation contexts: the implementation of firm strategy and culture (e.g., Johnson and Sohi 2017), selling new products (e.g., Fu et al. 2009), or the adoption of new technology by the sales force (e.g., Hunter and Panagopoulos 2015)—see Appendix Table 10. These diverse contexts do not reveal any generic transformation drivers; rather, our review implies that successful transformations depend on the adequate management of specific drivers of change that pertain to a particular transformation context.

Although the specific requirements and drivers of change seem context specific, we note evidence of *three key driver categories of sales force-wide planned change*, related to the individual salesperson, sales managers, and social influences—see Appendix Table 10. First, transformations depend on individual salesperson characteristics related to change, such as attitudes, abilities, and behaviors (Ahearne et al. 2010; Johnson and Sohi 2017; van der Borgh and Schepers 2018; Wieseke et al. 2008). Second, sales management can drive change through its emphasis, leadership styles, information provision, sales tools, organizational resources, or training (Hayati et al. 2018; Morgan and Inks 2001; Terho et al. 2017; van der Borgh and Schepers 2018; Zablah et al. 2012). Third, social influence by experts, peers, leaders, or appointed champions can lead to change (Avlonitis and Panagopoulos 2005; Keränen and Liozu 2020; Lam 2010;

Wieseke et al. 2008, 2009). That is, sales force-wide transformations appear to result from an interplay of individual salesperson and organizational drivers, and the latter incorporate both management and subtler forms of social influence by peers.

We also find that prior research offers competing premises regarding the *heterogeneity of transformation paths*—see Appendix Table 10. Most studies predict uniform transformation paths and seek to identify a clear set of transformation drivers that will lead to desired outcomes (e.g., Hayati et al. 2018; Homburg et al. 2010; Hunter and Panagopoulos 2015; Johnson and Sohi 2017). Yet some studies highlight that salespeople differ fundamentally in their ability to change and argue that the “successful implementation of planned change interventions largely depends on identifying and appreciating the heterogeneity of individual traits that share meaning with the change” (Ahearne et al. 2010, p. 65). Contributions that recognize salespeople’s individual transition paths mainly adopt a narrow focus though, such as determining how salespeople differ in their ability to change (Ahearne et al. 2010) or the role of single moderators in affecting salespersons’ ability to change (see Mullins et al. 2019; Terho et al. 2017; Zablah et al. 2012). Thus, we know fairly little about how to manage overall sales force transformations by taking the profiles of individual salespeople into account.

This review of sales force transformation research in turn indicates that implementing a sales force-wide planned change in a complex transformation context (e.g., solution selling) likely requires considerations of multiple drivers of change that operate on multiple levels, both individual and organizational. Furthermore, the drivers can initiate multiple possible transformation paths among the heterogeneous sales force, reflecting the various profiles of individual salespersons. The scarcity of empirical investigations of these heterogeneous transformation paths offers little evidence regarding how these identified principles operate in practice. Therefore, we also consider solution selling research in order to establish the nature of the specific transformation context we study and identify some drivers that might facilitate salespeople’s engagement in solution selling.

### Solution selling research

Among recent service and marketing studies of B2B solutions (Eggert et al. 2014; Macdonald et al. 2016, Worm et al. 2017), the majority focus on the underlying concept of business solutions and general requirements for seller and customer firms. Only a handful of solution studies explicitly address the role and activities of salespersons (e.g., Koponen et al. 2019; Panagopoulos et al. 2017; Ulaga and Kohli 2018; Ulaga and Loveland 2014). To develop a foundation for understanding the requirements that underlie salesperson engagement in

<sup>1</sup> We combined search terms pertaining to selling (“sales force” OR “salesperson” OR “sales organization” OR “selling”) with those related to transformation (“transformation” OR “change” OR “shift” OR “new” OR “implementation”), which resulted in 689 matches.

solution selling, we turn to solution selling literature to develop three main insights (Table 1): (1) the concept of solution selling, (2) individual and organizational requirements associated with it, and (3) its outcomes.

Research that investigates the *concept of solution selling* explicates differences between solution and product selling. Customer solutions are more than bundles of customized, integrated goods and services; they entail joint supplier–customer processes (Macdonald et al. 2016; Tuli et al. 2007). Solution selling thus comprises four relational stages: (1) customer requirement definition, (2) customization and integration of goods and/or services, (3) deployment, and (4) post-deployment support (Panagopoulos et al. 2017). Qualitative studies also suggest that it differs substantially from traditional product selling. Compared with product selling, solution selling demands a stronger focus on co-creation relative to persuasion, fuzzier solution specifications, higher network complexity, and stronger relationship orientations (Uлага and Loveland 2014). In turn, salespeople have greater needs to understand customers' businesses, craft solutions that fit customer needs, orchestrate between supplier and customer stakeholders, and maintain a continuous relationship with customers (Friend and Malshe 2016; Panagopoulos et al. 2017; Sheth and Sharma 2008; Uлага and Kohli 2018).

The identified *requirements for solution selling* refer to both the individual salesperson and organizational levels. Researchers generally agree that solution selling requires a different type of salesperson than product selling (Uлага and Reinartz 2011), and in turn, they have identified several skills, attitudes, and behaviors that can facilitate solution selling. For example, among their skills, salespeople need general intelligence (Uлага and Loveland 2014) and communication competence (Koponen et al. 2019); in terms of attitudes, solution sellers benefit from a learning orientation, intrinsic motivation, and teamwork orientation (Uлага and Loveland 2014). Finally, the ability to practice value-based selling is a fundamental requirement of solution selling, because solutions ultimately build on the value-in-use concept (Macdonald et al. 2016; Storbacka 2011; Terho et al. 2012). Among the organizational requirements identified for solution selling, we limit our review to sales force issues. That is, solution selling requires managerial activities that help implement solution selling among the sales force, including the establishment of clear role expectations (Uлага and Kohli 2018) and specific training initiatives (Storbacka et al. 2011). Moreover, solution selling is more effective when cross-functional cooperation among coworkers exists (Panagopoulos et al. 2017; Tuli et al. 2007). Organizational engagement at the customer interface

**Table 1** Key solution selling research

Research Stream/Focus	Main Findings	Selected Articles
Stream 1: Concept of solution selling		
<i>Process-based definition</i>	Solution selling comprises four relational processes: (1) customer requirement definition, (2) customization and integration of goods and/or services, (3) deployment, and (4) post-deployment support.	Tuli et al. 2007; Panagopoulos et al. 2017
<i>Difference to product selling</i>	Solution selling differs from product selling with regard to (1) the underlying tenet (co-creation vs. persuasion), (2) requirement definition (fuzzy hybrid offering vs. customer-initiated, good-centric), (3) network complexity (multiple stakeholders in customer and vendor organization vs. limited number of stakeholders), and (4) outcome orientation (share growth and contract renewal vs. deal closing).	Uлага and Loveland 2014
Stream 2: Requirements posed by solution selling		
<i>Salesperson-level requirements</i>	Solution selling requires a different type of salesperson with specific (a) skills, like general intelligence or communication competence; (b) attitudes, like learning orientation, intrinsic motivation, or teamwork orientation; and (c) behaviors, like value-based selling.	Koponen et al. 2019; Terho et al. 2012; Uлага and Loveland 2014
<i>Organizational-level requirements</i>	Solution selling is supported by managerial practices, such as communication of expectations, training, facilitation of cross-functional cooperation, and strengthening relationship ties with key customer stakeholders	Panagopoulos et al. 2017; Friend and Malshe 2016; Storbacka et al. 2011; Tuli et al. 2007; Uлага and Kohli 2018
Stream 3: Consequences of solution selling		
<i>Consequences</i>	Salesperson solution involvement enhances (a) salesperson-level and (b) customer-level sales performance.	Panagopoulos et al. 2017

also is important, and several authors suggest that strong customer relationships and customer ecosystem-specific skills can be influential (Friend and Malshe 2016; Panagopoulos et al. 2017; Tuli et al. 2007).

Finally, regarding the *consequences of solution selling*, solution selling literature has established that salespeople are critical resources for achieving a successful solutions business. In particular, their solution involvement increases both salesperson-level and customer-level performance (Panagopoulos et al. 2017).

Along with these important insights, our review suggests two major gaps in the current solution selling literature. First, it tends to focus on the execution phase, to identify factors that might enhance the effectiveness of solution selling practices (Panagopoulos et al. 2017). Yet we lack a clear understanding of what elements must be in place first, to ensure that salespeople even become engaged in solution selling. Therefore, in this study, we address requirements for salespeople's solution selling engagement, as a fundamental prerequisite of successful solution selling (Miao and Evans 2013; Verbeke et al. 2011; Zablah et al. 2012). Engagement in a specific activity is a central motivational concept, referring to a person's investment of energy into a task (e.g., Miao and Evans 2013; Rich et al. 2010). Similar to Zablah et al. (2012), we define solution selling engagement as sales representatives' investment of energy in the task, reflected in the time and effort they devote to solution selling.<sup>2</sup>

Second, existing research typically focuses on one or a few requirements of solution selling, without considering their interplay. A sales force-wide transformation to solution selling is a tremendously complex undertaking though, and it is unlikely that any uniform, one-size-fits-all formula exists for ensuring salesperson engagement. Therefore, we consider various transformation conditions, operating at the levels of the individual salesperson and the organization, and we investigate how they might combine to facilitate salesperson solution selling engagement, using a configurational approach.

### Configurational approach to salesperson solution selling engagement

To propose the conceptual framework in Fig. 1 that explains salesperson solution selling engagement in solution transformations, we integrate the preceding insights from sales force transformation and solution selling research with configurational theory (Venkatraman 1989).

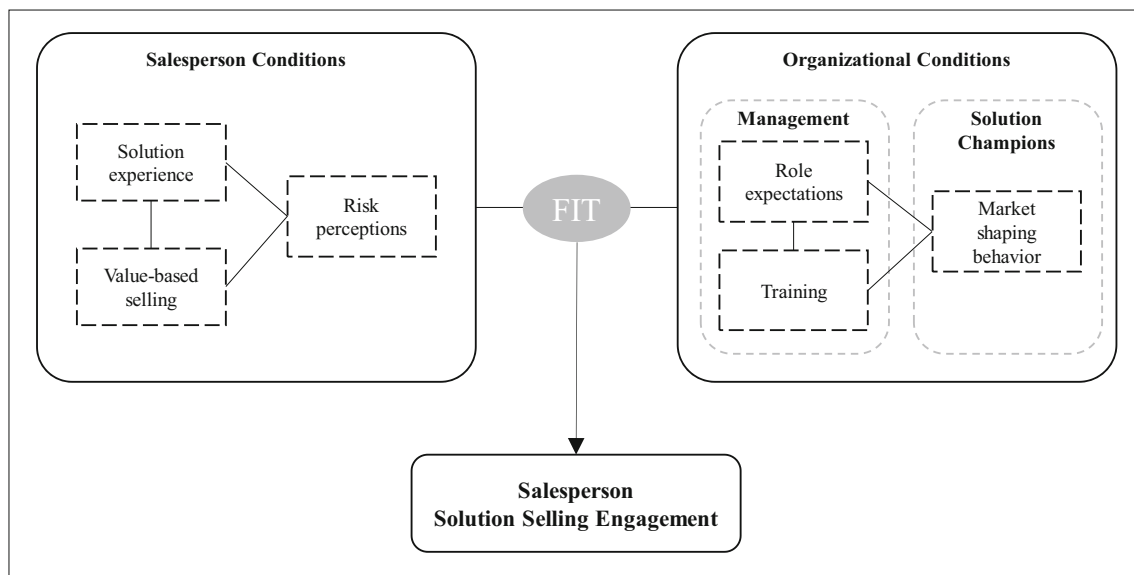
Configuration theory has been applied to a range of complex, multidimensional phenomena at individual, group, and

organizational levels (Meyer et al. 1993). Its central notion of strategic fit implies that different conditions in a particular context are not important intrinsically; rather, their criticality depends on how well they align (Venkatraman 1989). Different conditions can form gestalts or coherent configurations (Ragin 2000) that lead to a specific outcome. The notion of fit also entails several assumptions inherent to configuration theory, such as equifinality, causal asymmetry, and a distinction between necessary and sufficient conditions. *Equifinality* suggests that multiple configurations of conditions can lead to an outcome of interest (Doty et al. 1993). *Causal asymmetry* is the notion that the same conditions can lead to different outcomes, depending on how those conditions are arranged (Ordanini et al. 2014). Moreover, configurational theory distinguishes *necessary conditions*, which always must be present for an outcome to occur, from *sufficient conditions*, which may be present and, if so, help bring about the outcome. In sum, when conditions, relevant to the intended change, differ with the individual salesperson, salespeople still may achieve similar levels of solution selling engagement, as long as the conditions fit, and some salesperson-specific, necessary threshold conditions exist, which ultimately cannot be compensated for by greater alignment or fit.

To identify these relevant conditions, we rely on our review of sales force transformation and solution selling research. At the individual salesperson level, we expect that prior *solution selling experience* makes it easier for salespeople to engage (Franke and Park 2006), because they gain skills and knowledge related to applicable selling approaches, situations, and customers (e.g., Spiro and Weitz 1990; Weitz et al. 1986). In addition, their *risk perceptions* might create obstacles to salespeople's solution selling engagement. Perceptions of risks associated with the sale of novel offerings can cause salespeople to display conservatism (Sarin et al. 2012; van der Borgh and Schepers 2018). In a solution transformation context, risk perceptions might be especially prominent, because the transformation requires salespeople to develop entirely new capabilities, even while they confront uncertainty about the market acceptance of the new business model (Uлага and Loveland 2014). Moreover, solution selling engagement might require the salesperson's ability to practice *value-based selling* (Koponen et al. 2019; Terho et al. 2012, 2017; Uлага and Loveland 2014), because to achieve solution selling, customer stakeholders need to perceive the supplier in its new role, as a facilitator of the customer's value-in-use processes (MacDonald et al. 2016; Storbacka 2011).

In terms of organizational conditions related to managers, we draw on the theory of planned behavior and suggest that sales managers can encourage solution selling engagement by *communicating role expectations about solutions* and allocating resources to *solution training* (Fu et al. 2009, 2010; Zoltners et al. 2001). Communicating role expectations establishes subjective norms for new sales; solution training can

<sup>2</sup> Solution selling engagement differs from solution selling involvement. The former captures the motivational core of solution selling; the latter pertains to actual activities performed by salespeople, defined as "activities that help ... firms provide end-to-end solutions to the salesperson's customers" (Panagopoulos et al. 2017, p. 145).



**Fig. 1** Conceptual framework

enhance a salesperson's sense of self-efficacy or beliefs in his or her ability to sell the new offering.

In addition to these manager-related conditions, we incorporate social influences, in the form of *solution champions' market-shaping behavior*. Recent sales literature recognizes that selling is embedded in broader social systems, in which institutional arrangements strongly influence exchange practices (Hartmann et al. 2018). In our studied context for example, customers might not be accustomed to enacting relational solutions processes or could lack procurement practices consistent with solutions buying. They also might not view the product seller as a legitimate actor in the solutions selling context, such that they are unwilling to adjust their resource integration practices toward this seller. Thus, sellers likely need to shape customer's mindsets and practices purposefully, to be consistent with solutions buying. In turn, salespeople might benefit from input from dedicated solution champions (Keränen and Liozu 2020), who engage in market-shaping behaviors (Baker et al. 2019; Nenonen et al. 2019; Storbacka and Nenonen 2011). Through market shaping, institutional arrangements that govern the roles and behaviors of various stakeholders can be shaped intentionally by a firm that engages in activities aimed at redesigning the exchange, reconfiguring networks of actors, or reforming institutions (Nenonen et al. 2019).

In summary, by applying configurational theory to evidence from solution selling and sales force transformation literature, we predict that salesperson engagement in solution selling represents a complex phenomenon, in which combinations of conditions likely explain the outcomes better than individual conditions. Thus, as in Fig. 1, we expect individual salesperson conditions and organizational conditions to interact, which determines the level of situational fit that can facilitate salesperson engagement in solution selling. The resulting

configurations represent alternative pathways to engaging a heterogeneous sales force in solution selling in a complex transformation context.

## Methodology

We use fuzzy set qualitative comparative analysis (fsQCA) (Ragin 2008) to investigate the combinations of conditions that might facilitate solution selling engagement among a heterogeneous sales force. fsQCA “bridges quantitative and qualitative approaches” (Ragin 2008, p. 82) and is most suited to identify combinations of multiple conditions that lead to a desired outcome (Kraus et al. 2018). Unlike more quantitative approaches which build on correlations, fsQCA examines logical connections between conditions and an outcome to determine whether some single or a set of conditions are necessary or sufficient for an outcome to occur (Kraus et al. 2018). Applying a set-theoretic logic, each individual observation is regarded as a whole, consisting of a specific combination of conditions that is related or unrelated to an outcome of interest, and is not disaggregated into separate variables (Fiss 2011).

fsQCA originally stems from the political science and sociology literature. In recent years, fsQCA has also gained increasing popularity in marketing and service research. Studies that adopt it have provided novel insights into service innovation attributes (Ordanini et al. 2014), configurations of drivers for successful service infusion (Forkmann et al. 2017), and the interplay of market orientation and marketing performance measurement (Frösén et al. 2016), among others. While fsQCA was originally developed for analyzing qualitative data with relatively small sample sizes, it is increasingly used to also analyze large samples of up to 1000 cases (Schneider and Eggert 2014). As a consequence, fsQCA can be considered an

alternative to conventional data analysis methods for samples of any size. In choosing the appropriate methodology, researchers should mainly consider the research aim and the assumed causal structure of a research phenomenon (Schneider and Eggert 2014). In the paragraph that follows, we contrast fsQCA with conventional data analysis methods, i.e., regression and cluster analysis, and also delineate when each of these approaches is most appropriate.

### Contrasting fsQCA with conventional data analysis methods

We argue that fsQCA is the best method to capture the causal complexity inherent to applications of configurational theory (Böhm et al. 2017; Frösén et al. 2016). FsQCA investigates how several causal conditions jointly (as configurations) explain an outcome of interest (Fiss 2011; Ragin 2000), thereby identifying the central causes of a desired outcome (“causes-of-effects”, Mahoney and Goertz 2006). In doing so, fsQCA allows to incorporate all the central assumptions of configuration theory, namely, conjunctural causation, equifinality, causal asymmetry, and the necessity versus sufficiency of causal conditions (Table 2).

First, fsQCA reveals how several conditions combine to create an outcome (Fiss 2011). In other words, fsQCA builds on the premise that the interplay of conditions rather than single conditions constitute an outcome of interest, which is termed conjunctural causation (Schneider and Eggert 2014). Second, it addresses equifinality by allowing several different configurations to lead to the same outcome (Fiss 2007). Third, fsQCA can distinguish necessary and sufficient conditions and thereby provides a comprehensive analysis of the relationship between a condition and an outcome (Fiss et al. 2013). A condition is considered necessary when the focal outcome can only be obtained in the presence of that condition; it is sufficient when the condition always leads to the focal outcome (Fiss 2007). Combining these situations, fsQCA can uncover four different forms of causality (Schneider and Eggert 2014). Fourth, fsQCA accounts for

causal asymmetry, in that the same condition can lead to different outcomes depending on how it is combined with other conditions. This also implies that the absence of a condition that leads to an outcome does not necessarily imply the absence of the outcome (Ragin 2008). Given these characteristics, fsQCA is considered advantageous when researchers are interested in identifying the central causes of a certain outcome (“causes-of-effects”) and when the links between different conditions are considered to be complex, that is, when an outcome has more than one cause and when these causes work together to cause the outcome (Kraus et al. 2018), as is the case with our research.

In contrast, conventional data analysis methods such as regression or cluster analyses often fail to capture the nuances of causal complexity (Frösén et al. 2016), since they address only some of the assumptions of configuration theory, as shown in Table 2. *Regression analysis* estimates the average or net effect of one or more independent variables on a dependent variable (Mahoney and Goertz 2006). This way, researchers are able to determine how much a particular variable influences the outcome (“effect-of-causes”; Mahoney and Goertz 2006). Regression analyses typically identify “the one and only model” that best represents the empirical data (Schneider and Eggert 2014, p. 314). Although interaction effects can be used to test configurational arguments to some extent, they generally are limited to combinations of two or three variables, because higher-order interactions would be difficult to interpret and could cause multicollinearity problems (Frösén et al. 2016). In regression analysis, variables are also always regarded as both necessary and sufficient, so only one specific form of causality can be revealed (Schneider and Eggert 2014). Moreover, regression analysis implicitly assumes unifinality (i.e., the maximum outcome is achieved only if all positively [negatively] correlated variables are maximized [minimized]) and causal symmetry (i.e., the effect of an increase in a variable is equal to and opposite the effect of a decrease of the same magnitude in that variable) (Fiss et al. 2013). In sum, regression analyses are most appropriate when researchers aim to test how much a particular variable influences the outcome (“effect-of-causes”; Mahoney and Goertz

**Table 2** Suitability of different methods for testing causal complexity

	fsQCA	Regression	Cluster Analysis
Research Aim	Identify combinations of conditions that lead to an outcome; Causes-of-effects	Estimate average net effects of single variables; Effect-of-causes	Identify distinct groups of cases that are similar in several variables
Assumed Causal Structure	Links between conditions are complex	Links between variables are linear and additive	Internal causal structure is not relevant
Addressed Assumptions of Configuration Theory			
Uncovers conjunctural causation	✓	(✓)	✓
Identifies equifinal solutions	✓		✓
Distinguishes between necessity vs. sufficiency	✓		
Allows for causal asymmetry	✓		

2006) and when the links between the variables are assumed to be additive and linear rather than complex and configurational (Schneider and Eggert 2014).

*Cluster analysis* can identify distinct groups of cases that are similar with regard to a set of variables. The resulting group memberships can be used to predict an outcome of interest, which produces results similar to fsQCA (Cooper and Glaesser 2011). Nevertheless, there are major conceptual differences between fsQCA and cluster analysis, including the inability of cluster analysis to distinguish necessary from sufficient conditions (Frösén et al. 2016) or account for asymmetric relationships (Fiss 2011). Compared with fsQCA, cluster analysis also is more inductive, because membership in a specific cluster is driven at least partly by the distribution of variables within a particular sample (Cooper and Glaesser 2011). Moreover, cluster analysis does not help to determine those aspects of a configuration that are central to the outcome of interest (Fiss 2011), involving limited insights into the internal causal structure of a configuration. As a result, cluster analysis is mainly suited for research with a descriptive approach, e.g. when researchers aim to identify distinct groups of cases with regard to a set of variables, without being interested in *how* the different variables work together (Fiss 2007).

Summing it up, fsQCA allows researchers to gain a more fine-grained understanding of the causal complexity underlying a specific research phenomenon. In our case, it enables us to identify combinations of individual and organizational conditions that together induce salespeople's engagement in solution selling, rather than individual conditions that are universally relevant to solution selling engagement. Moreover, fsQCA allows us to uncover several equifinal ways to engage salespeople in solution selling, depending on their heterogeneous starting position.

## Empirical context and data collection

According to Schneider and Wagemann (2010), familiarity with the empirical context is advantageous when conducting fsQCA, because it facilitates the choice of relevant conditions and helps verify the resulting configurations. We have engaged in a long-term research collaboration with a European manufacturer of intelligent building solutions that continues to undergo an organization-wide solution transformation process, so we have notable access to relevant cases (i.e., individual salespersons nested in sales organizations). This research collaboration has spanned more than 10 years, and the primary study context pertains to the solution transformation process. The company employs over 50,000 employees and reports revenues of nearly 10 billion euros. It operated for more than a century as a product manufacturer, so its organization, processes, and technologies strongly evolved according to this established product business. But in the past decade, it has engaged in concerted efforts to transform from a product manufacturer to a solution provider, dedicated to delivering an enhanced building use experience.

With its solution business, this firm seeks positive impacts for the businesses of its key customers, such as by simplifying the construction process and making it easier for building owners to manage the building use experience. This change in vision accompanied a novel offering that integrates different building subsystems into an intelligent solution. On the offering level, it entails the combination of various product and service components to constitute the smart building solution. Initially, the firm sold and delivered these solutions through a dedicated, global project unit. To implement an organization-wide transformation to the solution business, the firm later developed a modular solution offering that could be sold by salespeople nested in its various subsidiaries around the globe. Previously, salespeople targeted by the transformation had been responsible solely for sales of the company's core product offerings. Given that situations in which companies' salespeople simultaneously sell existing and new offerings are hard to implement (van der Borgh et al. 2017), the firm established a dedicated transformation program. We leveraged our close access to key decision-makers in the firm, combined with our understanding of prior literature, to identify pertinent conditions for solution selling engagement in this relevant case.

To understand the conditions that prompt salesperson solution selling engagement, we collected multilevel and multisource survey data from salespeople, sales managers, and solution champions in the company's various sales organizations. We approached 34 local sales organizations that operate in different, international sales areas. They are country subsidiaries of varying sizes, tasked with selling the firm's global offering in their respective geographical regions. The sales organizations are expected to handle all types of customers and offerings except for highly complex, fully tailored, large-scale solutions that exceed a specified monetary threshold and thus get sent to the global project organization. The fsQCA methodology requires matched triadic data with no missing values for the studied conditions; we were able to collect complete triadic data sets from 26 local sales organizations, representing 76% coverage. The 8 excluded organizations lacked management (3), champion (2), or salesperson (3) responses.

From the sales organizations with complete data sets, we collected 26 sales manager responses and 23 solution champion responses (3 champions worked with two organizations each). The 26 units employed a total of 624 salespersons. The solution transformation had started one year before the survey, but the units had reached different phases. In most of them, some salespeople still had not been tasked with selling the new solutions offering. Therefore, to identify relevant informants, the salesperson survey started with five qualification questions about the salesperson's (1) attendance at the firm's global solution offering launch event, (2) attendance at the firm's local solution offering launch event, (3) attendance at training dealing with the solution offering, (4) current involvement in solution sales, and (5) the next year's planned involvement in solution sales. Negative responses led to the



informant’s disqualification from this study. We sent the questionnaire to 624 salespeople and received 290 responses, for a response rate of 45%. When we excluded those who did not pass the qualification questions, we retained 200 solution salespeople in 26 units, such that 69% of the respondents were involved in the solution selling transformation. After dropping

responses with missing values, we ended with 184 usable responses, for a total response rate of 29%. Considering that many salespeople had not yet been involved in the solution selling transformation though, the effective response rate is likely higher. Table 3 summarizes the respondents’ demographics.

**Table 3** Respondent demographics

SALESPEOPLE			CHAMPIONS			MANAGERS		
Sales Experience	N	Percent	Sales Experience	N	Percent	Sales Experience	N	Percent
5<	45	24.5	5<	8	34.8	5<	5	19.2
5-9	37	20.1	5-9	4	17.4	5-9	5	19.2
10-14	39	21.2	10-14	4	17.4	10-14	2	7.7
15-19	24	13	15-19	5	21.7	15-19	4	15.4
20-24	23	12.5	20-24	0	0	20-24	2	7.7
25>	16	8.7	25>	0	0	25>	4	15.4
<b>Total</b>	<b>184</b>	<b>100</b>	<b>Missing</b>	<b>2</b>	<b>8.7</b>	<b>Missing</b>	<b>4</b>	<b>15.4</b>
			<b>Total</b>	<b>23</b>	<b>100</b>	<b>Total</b>	<b>26</b>	<b>100</b>
Gender	N	Percent	Gender	N	Percent	Gender	N	Percent
Male	167	90.8	Male	21	91.3	Male	23	88.5
Female	10	5.4	Female	1	4.3	Female	1	3.8
Missing	7	3.8	Missing	1	4.3	Missing	2	7.7
<b>Total</b>	<b>184</b>	<b>100</b>	<b>Total</b>	<b>23</b>	<b>100</b>	<b>Total</b>	<b>26</b>	<b>100</b>
Education level	N	Percent	Education level	N	Percent	Education level	N	Percent
Master or higher	52	28.3	Master or higher	7	30.4	Master or higher	11	42.3
Bachelor	56	30.4	Bachelor	10	43.5	Bachelor	11	42.3
Vocational degree	36	19.6	Vocational degree	6	26.1	Vocational degree	3	11.5
High school	26	14.1	High school	0	0	High school	1	3.8
Other	13	7.1	Other	0	0	Other	0	0
Missing	1	.5	<b>Total</b>	<b>23</b>	<b>100</b>	<b>Total</b>	<b>26</b>	<b>100</b>
<b>Total</b>	<b>184</b>	<b>100</b>						
Education type	N	Percent	Education type	N	Percent	Education type	N	Percent
Technical degree	85	46.2	Technical degree	13	56.5	Technical degree	12	46.2
Business degree	50	27.2	Business degree	5	21.7	Business degree	10	38.5
Other	33	17.9	Other	4	17.4	Other	2	7.7
Missing	16	8.7	Missing	1	4.3	Missing	2	7.7
<b>Total</b>	<b>184</b>	<b>100</b>	<b>Total</b>	<b>23</b>	<b>100</b>	<b>Total</b>	<b>26</b>	<b>100</b>
Age	N	Percent	Age	N	Percent	Age	N	Percent
25<	1	.5	25<	0	0	25<	0	0
25 – 29	10	5.4	25 - 29	0	0	25 - 29	0	0
30-34	24	13	30-34	4	17.4	30-34	0	0
35-39	37	20.1	35-39	3	13	35-39	2	7.7
40-44	36	19.6	40-44	6	26.1	40-44	2	7.7
45-49	25	13.6	45-49	3	13	45-49	8	30.8
50-54	24	13	50-54	3	13	50-54	7	26.9
55-59	16	8.7	55-59	3	13	55-59	4	15.4
60>	11	6	60>	1	4.3	60>	1	3.8
<b>Total</b>	<b>184</b>	<b>100</b>	<b>Total</b>	<b>23</b>	<b>100</b>	<b>Missing</b>	<b>2</b>	<b>7.7</b>
						<b>Total</b>	<b>26</b>	<b>100</b>

**Table 4** Construct items, loadings, and reliability statistics

Items	Loading	$\alpha$	CR	AVE
<i>Solution selling engagement<sup>a</sup> (based on Fu et al. 2009)</i>		.96	.97	.92
Compared to other salespeople, how much time do you spend on selling solutions?	.94			
Compared to other salespeople, how intensively do you work to sell solutions?	.98			
Compared to other salespeople, how much overall effort do you put into selling solutions?	.97			
<i>Perceived solution risk<sup>a</sup> (adapted from Sarin and O'Connor 2009)</i>		.89	.95	.90
Solution sales can harm my sales performance.	.95			
Solution sales can harm my existing customer relationships.	.95			
Solution sales can harm my reputation among colleagues at my firm.*	–			
<i>Solution experience<sup>b</sup></i>		–	–	–
I have sales experience with offerings that are comparable to our solutions.	1.00			
<i>Value-based selling<sup>a</sup> (based on Terho et al. 2017)</i>		.86	.90	.69
I use a value-based selling approach.	.89			
Based on a profound knowledge of my customers' business, I show how our products/ services will improve their company's performance.	.88			
I work towards improving my customers' bottom line.	.70			
I focus on identifying opportunities to improve customers' business profits.	.84			
<i>Communication of role expectations<sup>b</sup> (based on Homburg et al. 2010)</i>		.94	.95	.84
I regularly instruct our salespeople to spend their time and attention to solution sales.	.79			
I keep telling our salespeople that they must gear up for solution sales.	.94			
I intensively encourage our salespeople to promote solution solutions.	.93			
I push our salespeople to solution sales.	.93			
<i>Solution training<sup>c</sup> (adapted from Homburg et al. 2009; Jelinek et al. 2006)</i>		.92	.94	.81
Our salespeople receive thorough training regarding the technologies for our solutions.	.93			
Our salespeople receive thorough sales process-related training for solution sales.	.90			
Our salespeople receive thorough customer business-related training for solution sales.	.90			
Our salespeople continuously receive training that enhances their ability regarding solution sales.	.93			
<i>Champion market-shaping behavior<sup>a</sup> (new scale)</i>		.88	.92	.74
I regularly meet key stakeholders in this industry to showcase our solution vision.	.88			
I systematically invest time and effort to make customers rethink their purchasing preferences.	.92			
I actively influence key opinion leaders in our industry to remove customer constraints for solutions.	.86			
I work hard to change customers' existing purchasing practices to match with our solutions.	.76			

<sup>a</sup> Anchors: 1 (strongly disagree) to 7 (strongly agree).

<sup>b</sup> Anchors: 1 (no experience) to 7 (extensive experience).

Notes: CR = composite reliability, AVE = average variance extracted.

\* Removed indicator.

## Measures

We used established scales to study the transformation conditions whenever possible (see Table 4). Unless otherwise noted, all items rely on seven-point Likert scales, with 1 indicating strong disagreement and 7 indicating strong agreement. The solution selling engagement, perceived solution risk, solution experience, and value-based selling data come from the salesperson survey. To measure *solution selling engagement* outcomes, we use a three-item scale from Fu et al. (2009) that captures the time, energy, and overall effort salespeople invest in selling the launched solution. *Perceived solution risk* relies on items adapted from Sarin and O'Connor (2009), encompassing

the degree to which salespeople think solution selling might harm their sales performance and existing customer relationships. The scale for *value-based selling* comes from Terho et al. (2017) and measures the extent to which salespeople have used value-based selling approaches in their previous sales activities. To measure *solution experience*, we ask salespeople to rate their past sales experience with offerings that are comparable to the launched solutions, on a semantic differential scale from 1 (no experience) to 7 (extensive experience).

On the organizational level, we consider three key conditions. From the management data, we assess sales managers' communication of *role expectations* regarding solutions, reflected in the extent to which sales managers stress solutions

**Table 5** Correlations, means, and standard deviations

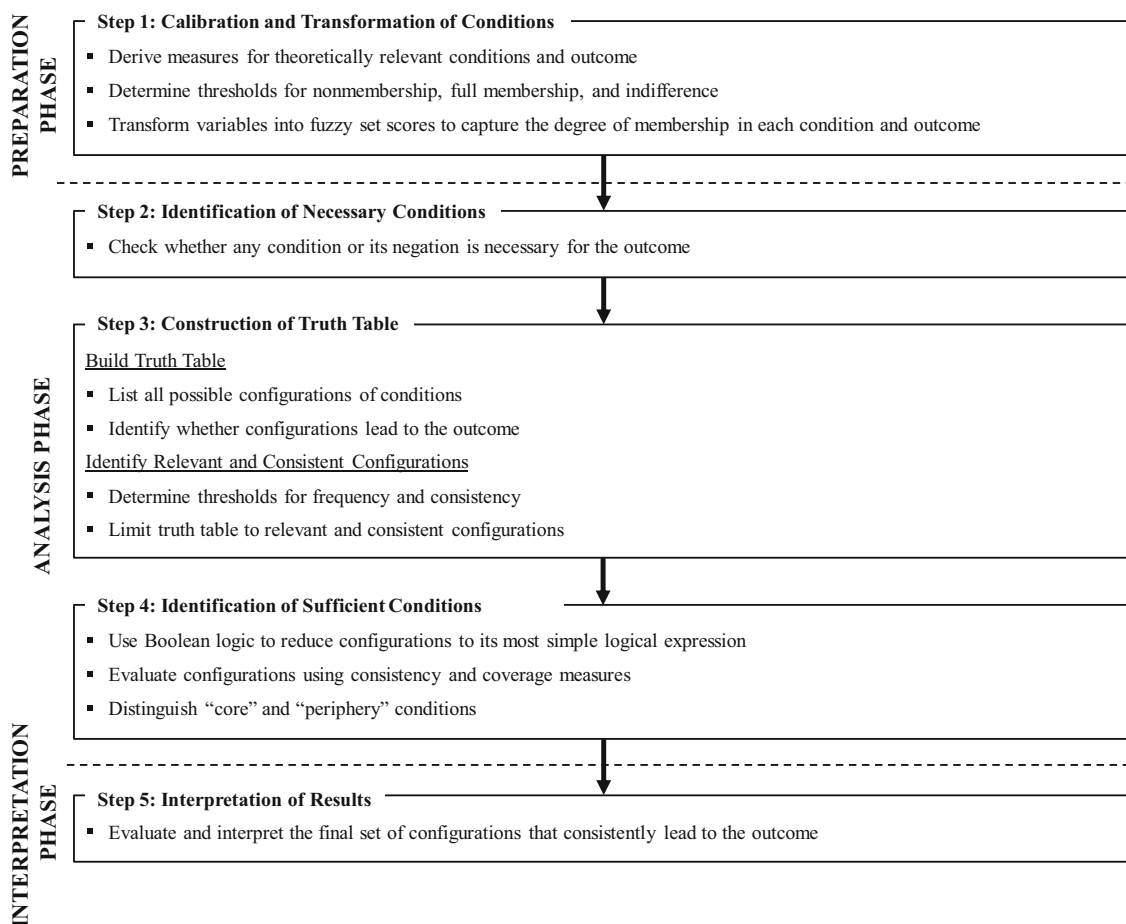
Variable	1	2	3	4	5	6	7
1. Solution selling engagement	<b>.96</b>						
2. Perceived solution risk	-.01	<b>.95</b>					
3. Solution experience	.38**	-.08	–				
4. Value-based selling	.08	-.18*	.19*	<b>.83</b>			
5. Communication of role expectations	.08	-.17*	.05	.15*	<b>.90</b>		
6. Solution training	.01	-.14	.01	.07	.63**	<b>.92</b>	
7. Champion market-shaping behavior	-.07	-.11	.01	.09	.20**	-.02	<b>.86</b>
Mean	4.17	2.78	4.11	5.54	5.00	4.09	5.21
Standard deviation	1.47	1.53	1.80	0.92	1.10	1.39	1.52
N	184	184	184	184	23	26	26

\*  $p < .05$ . \*\*  $p < .01$ . (Significance is based on two-tailed tests.)

Note: The square root of the average variance extracted appears on the diagonal in bold.

and encourage salespeople to sell them (Homburg et al. 2010). The managers also indicate the extent of *solution training* for their sales force (Homburg et al. 2009; Jelinek et al. 2006). For solution champions, we focus on *market-shaping behavior* designed to modify customer-side features and influence industry norms (Nenonen et al. 2019). This market-shaping behavior is measured with a new scale, with items developed based on the

construct definition, five field interviews with champions and managers involved with market-shaping initiatives, and relevant prior literature. To ensure the clarity and relevance of the scale indicators, we reviewed the questionnaire with two senior executives who designed the global solution transformation program implemented by our partner sales organization. The data analysis supports the validity and reliability of the scales,



**Fig. 2** Analytical procedure of fuzzy-set qualitative comparative analysis

with Cronbach's alphas ( $>.70$ ), composite reliabilities ( $>.70$ ), average variances extracted ( $>.50$ ), and factor loadings ( $>.70$ ) that exceed recommended minimum thresholds (Table 5). Fornell and Larcker's (1981) criterion also is met. We sum the validated scales for the fsQCA. Table 5 contains the descriptive statistics and correlations of the measures.

## Analytical procedure and empirical results of the fsQCA

FsQCA usually involves five steps (Fig. 2), which we specify here, together with the empirical study results. We conduct our analysis using the fs/QCA 3.0 software package (Ragin and Davey 2016).

### Step 1: Calibration and transformation of conditions.

In a first step, the different measures for the conditions and the outcome are calibrated and transformed into fuzzy set scores ranging from 0 to 1, indicating the degree of membership in each condition. This effort requires determining thresholds for nonmembership, full membership, and indifference for each variable. The calibration should build on theoretical anchors instead of empirical means to classify membership versus nonmembership (Fiss 2011). In line with Frösén et al. (2016), we use theoretically meaningful thresholds to calibrate our Likert scales, with 2 (disagree) indicating the threshold for non-membership (fuzzy set score of .05), 6 (agree) indicating the threshold for full member-

**Table 6** Calibration

Construct	Original Scale	Thresholds Used in Calibration	
Solution selling engagement	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")
Perceived solution risk	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")
Solution experience	Semantic differential scale (from 1 "no experience" to 7 "extensive experience")	Threshold for full membership (fuzzy score of .95)	7 ("extensive experience")
		Crossover point (fuzzy score of .50)	4
		Threshold for non-membership (fuzzy score of .05)	1 ("no experience")
Value-based selling	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")
Communication of role expectations	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")
Solution training	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")
Champion market-shaping behavior	Summed Likert scale (from 1 "strongly disagree" to 7 "strongly agree")	Threshold for full membership (fuzzy score of .95)	6 ("agree")
		Crossover point (fuzzy score of .50)	4 ("neither agree nor disagree")
		Threshold for non-membership (fuzzy score of .05)	2 ("disagree")

**Table 7** Necessary conditions for solution selling engagement

Condition	Consistency	Coverage
<i>Salesperson conditions</i>		
Perceived solution risk	.35	.77
~ Perceived solution risk	.84	.64
Solution experience	.71	.76
~ Solution experience	.48	.57
Value-based selling	.95	.63
~ Value-based selling	.22	.81
<i>Organizational conditions</i>		
Communication of role expectations	.86	.66
~ Communication of role expectations	.36	.76
Solution training	.67	.68
~ Solution training	.54	.68
Champion market-shaping behavior	.81	.62
~ Champion market-shaping behavior	.35	.73

Notes: ~ indicates the absence of a condition

ship (fuzzy set score of .95), and 4 (neither agree nor disagree) indicating the crossover point (fuzzy set score of .50). For solution experience, measured with a semantic differential scale with two polarized response options, we use the scale endpoints 1 (no experience) and 7 (extensive experience) as thresholds for full non-membership and membership as well as their mid value as the crossover point (see Table 6).

**Step 2: Identification of necessary conditions.**

The second step checks whether any condition or its negation are necessary for the outcome of interest. A single condition is necessary if it is always present (absent) when the outcome occurs (Fiss 2007), that is, when the consistency score for a specific condition exceeded a threshold of .90 (Schneider and Wagemann 2010). The consistency scores in our study ranged between .22 and .95, and one condition (value-based selling) exceeds the .90 threshold (Table 7): Salespeople’s value-based selling is a necessary condition to achieve solution selling engagement. Otherwise, solution

selling engagement theoretically can be achieved in the presence or absence of all other conditions.

**Step 3: Construction of truth table.**

In the third step, we construct a truth table that lists all possible combinations of conditions, then assign empirical cases to the different configurations and determine if they lead to the outcome or not (Fiss 2011). We can reduce the truth table to relevant and consistent configurations by applying minimum frequency and consistency thresholds. The truth table for our study, listing all logically possible combinations of the six conditions, is in Appendix Table 11. It consists of 64 configurations ( $2^k$ ;  $k$  = number of conditions). However, when a necessary condition is identified in the second step of fsQCA analysis, truth table rows that do not contain this condition should be excluded from the minimization process (Schneider and Wagemann 2012; Wagemann et al. 2016). When we exclude rows without value-based selling, the truth table encompasses 32 configurations, and we observe 18 of them in our sample. The remainders are mainly configurations that do not feature any communication of role expectations, which is reasonable; planned strategic transformations usually attract substantial management attention. Thus, as is typical for fsQCA studies, the logically excluded remainders represent unlikely empirical configurations (Ragin 2008). In turn, we feel confident that limited diversity is not a concern. We reduced the truth table to the set of meaningful configurations by identifying those consistently associated with high solution selling engagement. In line with prior studies, we used a consistency score of .75 and a frequency threshold of three observations per configuration (Ragin 2008). Nine configurations meet these thresholds and represent configurations that consistently lead to solution selling engagement.

**Step 4: Identification of sufficient conditions.**

The fourth step continues with the identification of sufficient conditions or configurations of conditions. In this step, we apply Boolean algebra to reduce relevant configurations linked with the outcome to their most simple, logical expressions (Ragin 2006). In detail, the truth table algorithm simplifies the logical expressions that describe the configurations based on redundancy levels (e.g., if  $A*B*C \rightarrow X$  and  $A*B*\sim C \rightarrow X$ , then  $A*B \rightarrow X$ ) (Fiss 2011; Ragin 2008). The resulting configurations can then be evaluated using consistency and coverage measures. Consistency indicates the sufficiency of a configuration and the extent to which configurations uniformly lead to the outcome (Ragin 2006); coverage captures the empirical relevance of a

configuration (Fiss 2007; Ragin 2006). Within each configuration, fsQCA can distinguish core and peripheral conditions, by comparing parsimonious and intermediate solutions (Fiss 2011). Core conditions exhibit a strong causal relationship with the outcome, whereas peripheral conditions have a weaker relationship with the outcome but reinforce the central features of the core conditions (Fiss 2011). Core conditions are part of both the intermediate and parsimonious solutions; peripheral conditions only appear in the intermediate solution.

In our case, we reduced the set of nine meaningful configurations to five configurations, using the fuzzy truth table algorithm implemented in fsQCA software (Ragin 2008). Table 8 reports the results obtained with the intermediate solution; Appendix 3 presents the overall solution using formal Boolean notation. We evaluate solution quality with consistency and coverage criteria. Consistency should not fall below .75 (Fiss 2011), as is the case for the overall solution and each individual configuration. That is, the consistency scores range

between .79 and .92, so each identified configuration is consistently associated with salespeople's solution selling engagement. In terms of coverage, the five identified configurations capture approximately 77% of membership in the outcome; the overall solution explains a substantial proportion of salespeople's solution selling engagement. Because the unique coverage values also are greater than 0, all configurations are relevant for explaining solution selling engagement. Within different configurations, we distinguish core from peripheral conditions by comparing the intermediate and parsimonious solutions.

#### Step 5: Interpretation of results.

Finally, we must interpret the fsQCA solution. The identified solution contains five configurations that consistently result in solution selling engagement among salespeople (see Table 8). As seen from the results, salespeople's value-based selling is a necessary condition, such that they engage in solution selling only if

**Table 8** Sufficient conditions for solution selling engagement

Outcome: Solution Selling Engagement	Configurations				
	C1	C2a	C2b	C3	C4
<i>Salesperson conditions</i>					
Perceived solution risk	○	○	○		●
Solution experience	●			●	
Value-based selling	●	●	●	●	●
<i>Organizational conditions</i>					
Communication of role expectations	○	●	●	●	●
Solution training	○	○	●		●
Solution champion market shaping	○	●	○	●	●
Raw coverage	.14	.36	.22	.56	.22
Unique coverage	.05	.06	.04	.19	.02
Consistency	.92	.79	.81	.83	.82
Solution coverage	.77				
Solution consistency	.77				

*Notes:* Black circles indicate the presence of a condition; white circles the absence of a condition; and blank spaces the irrelevance of a condition. Large circles indicate core conditions; small circles indicate peripheral conditions.

they have practiced a value-based selling approach in their prior selling tasks. Otherwise, solution selling engagement theoretically can be achieved in the presence or absence of the remaining conditions, depending on the situational fit.

Configuration C1 features exceptional salespeople with prior solution selling experience, a value-based selling capability, and no solution selling risk perceptions. In this optimal but rare situation, salespeople can transition into solution selling without any organizational support; their solution selling engagement is high even if they never receive communications about role expectations, training, or solution champion support. Configurations C2a and C2b characterize salespersons with no perceived solution selling risk who practice value-based selling. Experience with solutions is not of concern for these salespeople. They successfully engage in solution selling when sales management encourages the sales force by communicating role expectations and when they either receive training or champion support. Configuration C3 indicates that prior solution experience and value-based selling can result in engagement, irrespective of perceived risk, as long as there is a simultaneous presence of management-level support in terms of communication of role expectations and champion-level support. In this configuration, prior solution selling experience represents the core condition, and the other conditions reinforce it. Finally, salespeople in Configuration C4 confront high perceived solution selling risk, a core condition that is causally more important than the other conditions. In this situation, salespeople only engage in solution selling if they receive exhaustive support from both managers and champions, such that management communicates expectations and offers training, and solution champions create opportunities through their market-shaping efforts. As such, Configuration 4 seems to reflect the most challenging starting position for a sales force transformation to solution selling. In contrast, Configurations 2a, 2b, and 3 demand sales managers to invest in some but not all forms of organizational support.

In sum, our results reveal that it is not a single condition alone that explains salespeople's engagement in solution selling, but rather combinations of conditions, thereby illustrating the causal complexity inherent in solution transformations. The results support the notion that solution selling engagement is contingent on the fit between individual salesperson-level conditions and organizational support conditions. Specifically, the five identified configurations represent equifinal paths to engaging salespeople

with heterogeneous starting positions. Organizational support turns out to be vital for most salespeople, but not every form of organizational support is equally essential for every type of salesperson. In particular, the results suggest that salespeople who regard solution selling as risky require exhaustive support, by both managers and solution champions. If, instead, salespeople do not perceive the transition as risky, management and champion support can act as substitutes. Some exceptional salespeople (who know how to practice value-based selling, have prior experience with solution selling, and do not perceive risk) can engage without any organizational support.

## Discussion and conclusions

### Theoretical implications

This research contributes to both sales force transformation and solution selling literature. First, we take the notion of salesperson heterogeneity as a starting point and apply configurational thinking to demonstrate that a large-scale sales force transformation features equifinal paths to the intended outcome among a heterogeneous sales force. Prior studies have, with a few exceptions, sought to identify universal antecedents that will generally result in intended outcomes when applied across the entire sales force (e.g., Hayati et al. 2018; Homburg et al. 2010; Hunter and Panagopoulos 2015; Johnson and Sohi 2017). However, as suggested by Ahearne et al. (2010) and shown in this study, salespeople differ in their ability to change whereby a universal application of transformation conditions across the salesforce may not be the best approach to achieve complex transformations.

Second, our findings extend solution selling research with novel insights about the individual and organizational conditions of engaging product-centric salespeople in solution selling. Beyond the recognition that solution selling is important and challenging to implement, prior literature provides relatively little insights on how to foster the shift from product selling to solution selling (Panagopoulos et al. 2017; Ulaga and Loveland 2014). On a more general level, our results challenge and extend established thinking about the possibility of engaging product-oriented salespeople in solution selling. On the one hand, we confirm that not all salespeople are willing or able to move into solution selling (Ulaga and Loveland 2014; Ulaga and Reinartz 2011). On the other

hand, our results contest the prevailing notion that a transformation to solution selling requires large-scale recruitments of new salespeople (Uлага and Loveland 2014; Uлага and Reinartz 2011). As long as they have value-based selling capabilities, heterogeneous salespeople can be engaged in solution selling through appropriate organizational support tailored to the salesperson's individual needs.

With regard to the specific conditions of solution selling engagement, two findings are particularly important, given that they have not been addressed in prior solution selling research. First, risk perceptions emerged as a critical condition of salespeople's engagement in solution selling. While prior literature has mainly stressed the ability-related aspects of salesforce transformation, such as individual skills and capabilities (e.g., Bonney and Williams 2009; Uлага and Loveland 2014), our findings indicate that there is a need to consider salespersons' risk perceptions and ways to mitigate these perceptions through the provision of tailored organizational support for the transformation. Second, our results highlight the vital role of solution champions, which resonates with recent calls to adopt an institutional perspective in marketing and sales research (e.g., Baker et al. 2019; Hartmann et al. 2018; Vargo and Lusch 2016). When a new solution introduced to the

market does not fit customers' established resource integration practices, it requires the negotiation of institutional resistance (Hartmann et al. 2018), which often is beyond the capacity of any individual salesperson. Solution champions act on behalf of the organization to help the salesperson redesign the exchange, reconfigure networks of actors, or reform institutions (Baker et al. 2019; Nenonen et al. 2019; Storbacka and Nenonen 2011).

## Managerial implications

Our research provides several suggestions for how manufacturers should manage a sales force-wide transformation from product selling to solution selling (see Table 9).

First, with regard to the *general management of sales force transformations*, our results stress the fit between individual salesperson characteristics and different forms of organizational support. Building on this, we suggest a systematic planning of large-scale transformations that includes two major steps. Transformation management should begin by creating salesperson profiles, based on key conditions central to the transformation in question. Then, management can proceed by developing a tailored organizational support program. Such an approach provides salespeople with individualized support while also

**Table 9** Managerial implications

Instrumental Area	Key Findings	Suggestions
General Management of Sales Force Transformation	<ul style="list-style-type: none"> <li>• Solution selling engagement is contingent on the fit between individual characteristics and organizational support</li> </ul>	<ul style="list-style-type: none"> <li>• Systematic planning of transformation management should include (1) the creation of salesperson profiles and (2) the development of tailored organizational support programs that fit those profiles</li> </ul>
Sales Force Selection and Targeting	<ul style="list-style-type: none"> <li>• Few exceptional salespeople engage in solution selling virtually without any organizational support</li> <li>• Value-based selling is a threshold competency for solution selling engagement</li> <li>• Salespeople with high risk perceptions have the highest need for organizational support</li> </ul>	<ul style="list-style-type: none"> <li>• Identify most appealing candidates to form a smaller-scale solution sales force that kicks off the solution transformation (salespeople with high value-based selling abilities, solution selling experience, and low risk perceptions)</li> <li>• Screen salespeople for their ability to practice value-based selling</li> <li>• Introduce tools and trainings to enhance value-based selling capabilities if necessary</li> <li>• Reduce risk perceptions such as by offering solution incentives, setting realistic objectives, and communicating the benefits of solutions</li> </ul>
Forms of Organizational Support	<ul style="list-style-type: none"> <li>• Role expectations are an important facilitator of solution selling engagement</li> <li>• Champion support can act as substitute for management support</li> </ul>	<ul style="list-style-type: none"> <li>• Convince sales managers of the relevance of the solution business and the importance of communicating clear role expectations</li> <li>• Introduce dedicated solution champions</li> <li>• Solution champions might be chosen from the smaller-scale solution sales team that initially kicked off the solution transformation</li> </ul>



helping the organization to target its scarce organizational resources most efficiently.

Second, our results offer actionable guidelines to the *selection and targeting of salespeople to participate in solution selling*. We show that some exceptional salespeople can engage in solution selling without requiring virtually any organizational support; those salespeople exhibit value-based selling abilities, have solution selling experience, and express low risk perceptions. These rare salespeople are likely critical to initiating the first steps of a firm-wide solution transformation and might be part of a smaller-scale sales team to kick off the solution transformation. By sharing internal success stories, this initial sales team can create positive pressure that encourages other salespeople to also engage in solution selling.

For broader transformation roll-outs, our results provide important recommendations for identifying salespeople profiles and targeting them with appropriate support. All salespeople should be able to practice value-based selling, so managers should screen existing sales forces for the presence of this threshold competency. Beyond that, salespeople with different profiles can be engaged, through appropriate forms of organizational support, mainly determined by their risk perceptions. Because the need for support diminishes among salespeople with low risk perceptions, management could attempt to reduce risk perceptions by offering solution incentives, setting realistic objectives, and persuasively communicating the benefits of solution selling for customers, the company, and individual salespeople.

Third, managers can build on our research to select effective *forms of organizational support* for sales force transformations. Communicating role expectations emerges as an essential facilitator of solution selling engagement among salespeople; only a few exceptional salespersons shift into solution selling without it. Top-level management should therefore convince sales managers of the relevance of the solution business and stress the importance of communicating clear expectations to the sales force. Moreover, we identified solution champions as a potential substitute for management support. Manufacturers should therefore consider introducing dedicated solution champions within specific business units to facilitate solution transformations. These could be exceptional salespersons who have been part of a solution-specific sales team during the initial phases of the solution transformation.

## Limitations and further research

The limitations of this study offer promising avenues for further research. First, we focus on salesperson solution selling engagement, a critical first step toward realizing a sales force-wide solution transformation. It logically is needed for subsequent solution selling performance, yet engagement does not automatically translate into solution selling or customer-

related performance. Whereas our study offers valuable insights into the critical conditions that drive salespersons' solution selling engagement, further research is needed to detail its performance links and contingencies.

Second, to study the complex interplay of individual and organizational conditions, we collaborated with one firm, which granted us vast access to its salespeople, sales managers, and solution champions. Yet the data refer exclusively to one solution provider, working in a specific industrial setting, so the results cannot be automatically generalized to a broader population. Nevertheless, we posit that the particular transformation conditions identified in this study are likely to apply to the selling of most standardized, modularized solutions. Still, we encourage future research to confirm these findings in different empirical contexts.

Third, the results point to a crucial role of solution champions, as facilitators of solution selling engagement in an industrial sales force. Noting their importance, it would be worthwhile to determine further how solution champions' market-shaping activities shape salespeople's risk perceptions and help overcome customers' institutional resistance in a solution transformation context.

Fourth, given that fsQCA places a practical limit on the number of conditions feasible to include in the analysis (Wagemann et al. 2016), we chose to focus on salesperson and organizational conditions. In doing so, we indirectly address the customer perspective, for instance, by incorporating salespeople's risk perception that solution selling might harm their existing customer relationships. The need for solution champions' market shaping efforts reflects the readiness of customers to buy solutions. Nevertheless, we note that the customer perspective is still remarkably absent in solution selling research and therefore encourage future research to explicitly incorporate customer conditions as an additional level of analysis.

Finally, by focusing on selected conditions in the context of a solution transformation spanning both individual and organizational levels, we established novel insights about the nature of complex salesforce transformations. These exploratory insights pave the way for future research to develop and test a new theory of salesforce transformation that builds on the assumption that salesforce-wide transformations are contingent on the fit between individual and organizational conditions that interact to facilitate engagement of a heterogeneous salesforce in planned organization change. We encourage such theorizing efforts, incorporating multiple organizations across various transformation contexts.

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## Appendix 1

Table 10 Sales Force Transformation Research (full references available on request)

Study	Type of Transformation	Drivers that Facilitate Transformation	Categorization of Drivers		Uniformity of the Transformation	Design
			<i>Sp.</i>	<i>Soc. Org.</i>		
Mullins et al. (2019) JAMS	Sales force-wide implementation of firm culture and strategy: <i>customer value orientation</i>	Salesperson, leader, customer, and sales team factors explain salesperson motivation to conduct value-based selling. Prevention-focused salespersons move to value-based selling only when the sales team monitoring climate is lower.	X	X	Not uniform	N = 433 Salespersons; N = 70 Managers
Keränen and Liozu (2020) IMM	Sales force-wide implementation of firm culture and strategy: <i>customer value management</i>	Organizational value champions can facilitate customer value management through four role configurations related to the level (individual; organizational) and continuance (temporary; permanent). Various championing roles drive change among internal and external stakeholders.	X		Uniform	Qualitative, interviews with 59 managers
Hayati et al. (2018) JAMS	Sales force-wide implementation of firm culture and strategy: <i>new strategy</i>	Sales managers' transactional and transformational leadership and central peers' strategy role commitment drive salesperson strategy role commitment. Non-committed peers with high network centrality can hinder these effects.	X	X	Uniform	N = 398 salespersons; N = 60 Managers
Terho et al. (2017) IMM	Sales force-wide implementation of firm culture and strategy: <i>customer value orientation</i>	Salesperson adoption of value-based selling requires specific motivations and abilities, such as learning orientation and networking skills. Organizational opportunities, in the form of value assessment tools, can help less apt salespersons adopt value-based selling behaviors and boost the performance effects of value-based selling.	X	X	Not uniform	N = 944 Salespersons; N = 43 sales directors
Johnson and Sohi (2017) IMM	Sales force-wide implementation of firm culture and strategy: <i>New offering strategy</i>	Implementation motivation, opportunity, and ability drive salesperson strategy implementation behaviors. These variables are in turn driven by involvement in strategy development, role autonomy, and training. The effects of motivation and ability on strategy implementation behaviors are contingent on perceived opportunities, which both boost and weaken these effects.	X		Not uniform	N = 277 Salespersons
Boitchuck et al. (2014) JM	Sales force-wide implementation of firm culture and strategy: <i>preventing sales oriented behaviors</i>	Transformational leadership and supportive error management policy prevent salespersons from being selling oriented when facing sales failures.	X		Uniform	Longitudinal, N = 221 / N = 635 Salespersons;
Sarin et al. (2012) JMR	Sales force-wide implementation of firm culture and strategy: <i>new strategy</i>	Successful implementation of strategic change depends on management's ability to affect salesperson reward and risk perceptions for implementing the change.	X		Uniform	N = 828 salespersons in 204 branches
Chakrabarty et al. (2012) JPSSM	Sales force-wide implementation of firm culture and strategy: <i>customer orientation</i>	Top management long-term orientation and top management emphasis drive customer orientation among salespeople through social learning.		X	Uniform	N = 241 salespersons
Aheame et al. (2010) JM	Sales force-wide implementation of firm culture and strategy: <i>sales force wide planned change</i>	Some salespeople are better at adapting to change than others. Learning-oriented salespersons have suboptimal performance at the beginning of change but ultimately have steeper performance recovery curves and higher re-stabilization levels. Performance orientation has the opposite effect.	X		Not uniform	Longitudinal, N = 400 Salespersons
Lam et al. (2010) JM	Sales force-wide implementation of firm culture and strategy: <i>Market Orientation</i>	Market orientation diffuses to sales representatives as a social learning process from "Top management to Middle managers and Expert peers" who act as role models. Actors' network size hinders the informal route of learning through expert peers but not the formal route through middle managers.	X		Uniform	N = 1528 Salespersons; N = 285 managers; N = 43 directors
Wieseke et al. (2009) JM	Sales force-wide implementation of firm culture and strategy: <i>Organizational identification</i>	Organizational identification transfers top-down from business unit managers to middle management to salespersons. Leader-follower dyadic tenure and charismatic leadership moderate the social identification effects.	X		Uniform	N = 1005 Salespersons; N = 394 Sales managers; N = 22 BU managers; N = 85 salespersons

**Table 10** (continued)

Study	Type of Transformation	Drivers that Facilitate Transformation	Categorization of Drivers		Uniformity of the Transformation	Design
			<i>Sp.</i>	<i>Org.</i>		
Grant & Bush (1996) JPSSM	Sales force-wide implementation of firm culture and strategy: Organizational value congruence	Sequential and serial socialization tactics, highlighting role of providing information to salesperson and socialization by peers, are positively connected to organizational value congruence among the sales force.	X	X	Uniform	N = 172 salespersons N = 31 Managers
van der Borgh and Schepers (2018) JAMS	New product selling	Salesperson conservatism toward new products hinders engagement in efforts to sell new products but makes their efforts to sell new products more effective. Conservative selling behaviors and new product sales are driven by salespeople's risk assessments, moderated by new product information-guided risk framing, which determines the weight of the performance risk.	X	X	Uniform	N = 315 Salespersons
Chen et al. (2015) IMM	New product selling	Output-, behavior-, and knowledge-based sales management controls drive salespeople's perceptions of organizational support for being innovative in new product selling and thereby affect new product sales performance	X	X	Not uniform	Conceptual
Zablah et al. (2012) JPSSM	New product selling	A job demands-resources model identifies determinants of salesperson new product selling outcomes. The model is a dual-process theory whereby salesperson selling demands and selling resources affect new product selling engagement and burnout. Resources and demands interact to create these outcomes, calling for a balance between drivers.	X	X	Uniform	Conceptual
Kauppila et al. (2010) IMM	New product selling	Organizational support and control systems affect salespersons' reluctance to sell radically new products, both directly and indirectly through individual salesperson factors.	X	X	Uniform	Longitudinal, N = 226 Salespersons
Fu et al. (2010) JM	New product selling	Salesperson attitude and self-efficacy toward new products drive selling intentions; subjective norms are less effective drivers and also weaken other positive effects.	X	X	Uniform	Longitudinal N = 143 salespersons
Fu et al. (2009) JPSSM	New product selling	Assigned goals drive new product sales effort and sales with an inverted U-shaped effect. Self-set goals fully mediate the link between assigned goals and selling effort.	X	X	Uniform	N = 493 / N = 362 salespersons
Fu et al. (2008) JPSSM	New product selling	Product innovativeness has a positive and customer newness has a negative impact on salespeople's intention to sell new products, affecting new product performance indirectly.	X	X	Not uniform	N = 310 salespersons N = 112 Managers
Wieseke et al. (2008) JAMS	New product selling	Expected customer demand and sales managers' new brand adoption drives salesperson new brand adoption. For salespeople who perceive lower expected customer demand, the management adoption effect on their adoption is stronger.	X	X	Uniform	N = 112 sales managers
Rochford and Wortuba (1996) JAMS	New product selling	Adjustment of sales quotas is positively connected to new products' launch success	X	X	Uniform	N = 303 Salespersons
Hunter and Panagopoulos (2015) IMM	Adoption of sales technology	Salesperson's normative and continuance commitment to technological change drive sales technology infusion and thereby customer orientation and sales performance.	X	X	Uniform	N = 292 salespersons
Casio et al. (2010) IMM	Adoption of sales technology	Salesperson perceived alignment of top management and immediate supervisors' commitment to SFA is an important influence on salespeople's adoption.	X	X	Uniform	N = 1040 sales-persons; N = 416 Managers N = 22 directors
Homburg et al. (2010) JAMS	Adoption of sales technology	Regional and sales managers' SFA adoption has positive effects on subordinates' SFA adoption. These social effects explain SFA adoption beyond the effects of traditional TAM variables.	X	X	Uniform	N = 240 salespersons
Avlonitis and Panagopoulos (2005) IMM	Adoption of CRM technology	Perceived usefulness and personal innovativeness drive CRM acceptance. Social influences, such as supervisor and competitive influences, drive CRM acceptance beyond the TAM variables.	X	X	Uniform	

Table 10 (continued)

Study	Type of Transformation	Drivers that Facilitate Transformation	Categorization of Drivers		Uniformity of the Transformation	Design
			Sp.	Soc. Org.		
Jones et al. (2002) JPSSM	Adoption of sales technology	Personal innovativeness, attitude toward the system, and organizational facilitating conditions drive SFA system utilization.	X	X	Uniform	N = 85 salespersons
Morgan and Inks (2001)	Adoption of sales technology	Accurate user expectations, user influence, and training are positively related to acceptance of SFA technology.	X	X	Uniform	N = 131 salespersons
Hartmann et al. (2018) JM	General change of selling thought: <i>Service dominant logic / institutional view to selling</i>	A systemic and institutional perspective recognizes that selling unfolds over time and is embedded in broader social systems. A service ecosystems perspective on selling highlights the interaction between actors aimed at creating and maintaining “thin crossing points” through the ongoing alignment of institutional arrangements and the optimization of relationships. This view calls for attention to broader sets of actors who participate in selling processes.			–	Conceptual
Cuevas (2018) IMM	General change of selling thought: <i>Transformation of professional selling in B2B markets</i>	Contemporary professional selling is transforming by: (1) increasing emphasis of hybrid offerings, requiring deep customer business understanding; (2) more boundary-spanning and formalized sales relationships; and (3) sales roles that move away from isolated functions toward broader integration of end-to-end business processes. Transformation is driven by new types of buyer behavior and customer requirements, new information and communication technologies, and increasing globalization, concentration and competition.			–	Qualitative, interviews with 37 managers
Sheth and Sharma (2008) IMM	General change of selling thought: <i>Role of product to service shift for selling organizations</i>	Traditional product-focused sales organizations will evolve in two directions. First, technologies will reduce some traditional sales functions and face-to-face contact. Second, important customers are likely to be treated through customer-focused sales organizations and global account management teams. The shifts affect the section, training, and recruitment of salespeople, as well as their roles.			–	Conceptual
Wotruba (1996) IMM	General change of selling thought: <i>Transformation of Industrial selling</i>	Industrial selling is driven by new trends involving customers, competitors, and companies. The changes in markets drive changes related to position (towards managing customer value, customer need advocacy, acting as internal resource for policy making), process (establishing trust and obtaining information for offering development), and people (customer need diagnosing skills, team skills, creating an empowering atmosphere).			–	Conceptual
This study	<b>Sales force solution selling transformation</b>	<b>Salesperson solution selling engagement depends on the fit between salesperson and organizational conditions, which vary across the heterogeneous sales force.</b>	X	X	Not uniform	N = 184 salespeople, N = 23 champions, N = 26 sales managers

Notes: SFA = sales force automation, TAM = technology acceptance model, CRM = customer relationship management

## Appendix 2

**Table 11** Truth Table

Perceived Solution Risk	Solution Experience	Value-Based Selling	Role Expectations	Solution Training	Champion Market-Shaping Behavior	Number
0	1	1	1	1	1	36
0	0	1	1	1	1	16
0	0	1	1	0	1	9
1	1	1	1	1	1	8
0	0	1	1	1	0	6
0	1	1	1	0	1	5
0	1	1	0	0	0	5
1	1	1	1	0	1	4
1	0	1	1	1	1	4
0	1	1	1	1	0	3
0	1	1	1	0	0	2
0	1	0	1	1	1	2
1	0	0	1	1	1	2
1	1	1	1	1	0	1
1	1	1	0	0	0	1
0	1	0	0	0	0	1
1	0	1	1	1	0	1
1	0	1	1	0	0	1
1	0	1	0	0	0	1
1	0	0	1	0	1	1
0	0	1	1	0	0	1
0	0	1	0	0	0	1
0	0	0	1	1	1	1
1	1	1	0	1	1	0
1	1	1	0	0	1	0
1	1	1	1	0	0	0
1	1	1	0	1	0	0
1	1	0	1	1	1	0
1	1	0	0	1	1	0
1	1	0	0	0	1	0
1	1	0	1	1	0	0
1	1	0	1	0	0	0
1	1	0	0	1	0	0
1	1	0	0	0	0	0
0	1	1	0	1	1	0
0	1	1	0	0	1	0
0	1	1	0	1	0	0
0	1	0	1	0	1	0
0	1	0	0	1	1	0
0	1	0	0	0	1	0
0	1	0	1	1	0	0
0	1	0	1	0	0	0
0	1	0	0	1	0	0
1	0	1	1	0	1	0

**Table 11** (continued)

Perceived Solution Risk	Solution Experience	Value-Based Selling	Role Expectations	Solution Training	Champion Market-Shaping Behavior	Number
1	0	1	0	1	1	0
1	0	1	0	0	1	0
1	0	1	0	1	0	0
1	0	0	0	1	1	0
1	0	0	0	0	1	0
1	0	0	1	1	0	0
1	0	0	1	0	0	0
1	0	0	0	1	0	0
1	0	0	0	0	0	0
0	0	1	0	1	1	0
0	0	1	0	0	1	0
0	0	1	0	1	0	0
0	0	0	1	0	1	0
0	0	0	0	1	1	0
0	0	0	0	0	1	0
0	0	0	1	1	0	0
0	0	0	1	0	0	0
0	0	0	0	1	0	0
0	0	0	0	0	0	0

### Appendix 3. Boolean Algebra Representation of the Overall Solution

We can represent the overall solution using formal Boolean notation, which leads to the following solution formula:

$$\begin{aligned}
 & \sim \text{Risk Perceptions} * \text{Experience} * \text{Value-based Selling} * \sim \text{Role Expectations} * \sim \text{Training} * \sim \text{Market Shaping} \\
 & + \sim \text{Risk Perceptions} * \text{Value-based Selling} * \text{Role Expectations} * \sim \text{Training} * \text{Market Shaping} \\
 & + \sim \text{Risk Perceptions} * \text{Value-based Selling} * \text{Role Expectations} * \text{Training} * \sim \text{Market Shaping} \\
 & + \text{Experience} * \text{Value-based Selling} * \text{Role Expectations} * \text{Market Shaping} \\
 & + \text{Risk Perceptions} * \text{Value-based Selling} * \text{Role Expectations} * \text{Training} * \text{Market Shaping} \rightarrow \text{Solution Selling Engagement.}
 \end{aligned}$$

*Note:* \* indicates the logical ‘and’; + represents the logical ‘or’; ~ indicates the absence of a condition.

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