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IMPLEMENTING IBP/S&OP PROCESSES – THE MAIN MISTAKES USING THE EXAMPLE OF A GLOBAL COMPANY

Anna MYSŁOWSKA-PŁASZEWSKA[1], Marek DUDEK[2*]

[1] AGH University of Krakow; anna.myslowska@me.com, ORCID: 0009-0004-0891-7785
[2] AGH University of Krakow; madudek@agh.edu.pl, ORCID: 0000-0002-9818-739X
* Correspondence author

Purpose: For big companies the S&OP Process previously "just" the tool to prepare supply chain for expected volumes is now becoming the tool to deploy strategy. And as such, it is and should not be any longer considered as a "supply chain thing", the process is becoming a core process of the organization. Especially in complex organizations the transparency is very often limited and different parts of the organizations loose connection due to multi-level data aggregation delay in information transmission. The implementation of the S&OP process is yet not easy. The case study described in this paper shows some of the mistakes the companies make on the journey towards the IPB process.
Design/methodology/approach: The paper is a case study of an industrial company. The baseline for the paper was documentation of a implementation project done in a global company. Additionally wide literature study on the topic has been conducted.
Findings: The conclusions of the case study are in line with the findings presented in the literature. One of main factors leading to not effective S&OP process is lack of high management support and engagement.
Research limitations/implications: The case study was based on a global company so the conclusions cannot be applied to other companies. The study uses data from 2021-2023 because the effect of implementation is only visible after 1-3 years on average.
Practical implications: The paper can be an inspiration for the people implementing IBP process in a global company.
Originality/value: The authors presented in the paper an original handy method to measure the development in the process in the company and draw conclusions on focus areas for the development of the process. Also the methodology of the process implementation is presented with guidelines based on lessons learned from the project.
Keywords: IBP, Integrated Business Planning, SAP IBP.
Category of the paper: case study.

1. IBP/S&OP processes – state of the art

Integrated Business Planning (IBP) stands for integrated business planning process which is the successor of the sales and operations planning (S&OP) process known from the 80's last century. The process has developed throughout the years yet still the key is about balancing demand and supply. These days IBP is a comprehensive approach that aligns strategic, tactical, and operational planning across an organization to enhance decision-making and performance. The key components of an IBP process usually include:

- strategic planning - among others: a) long-term goals - establishing the long-term objectives and direction of the organization (Kepczynski et al., 2018a; Mc Loughlin, 2023), b) alignment with business priorities - ensuring that strategic plans are linked to business priorities and other initiatives (Kepczynski et al., 2018b),
- tactical sales and operations planning (S&OP) – among others: a) demand and supply review - regularly reviewing product demand and supply to ensure balance and alignment, b) integrated reconciliation i combining inputs from various functions to create a unified plan, c) management business review - periodic reviews by senior management to ensure alignment with strategic goals (Kepczynski et al., 2018a, 2018b),
- operational planning – among others: a) execution of plans - implementing detailed plans to ensure reliable and effective execution in the manufacturing environment and market, b) dynamic adaptation - adapting plans based on real-time information from the plant and supply chain (Smith, 2004),
- integration of business processes – among others: a) cross-functional collaboration - promoting collaboration across different functions and departments to achieve synergy (Ivanisevic et al., 2020; Ni, 2006) b) information sharing - ensuring seamless information flow between different systems and stakeholders (Chen, 2007),
- technology and systems integration – among others: a) enterprise resource planning (ERP) and business process management systems (BPMS) - integrating ERP with BPMS to enhance performance and flexibility (Aguirre-Mayorga, 2012), b) standardized integration architecture - using a standardized architecture to integrate various software applications and legacy systems (Puschmann, 2004),
- performance monitoring and evaluation - among others: a) continuous improvement - regularly monitoring and evaluating performance to identify areas for improvement (Mc Loughlin, 2023), b) feedback loops - implementing feedback mechanisms to refine and adjust plans based on performance data (Basavaraju, Fatahi Valilai, 2025),

- sustainability and governance – among others: a) sustainable supply chain management (SSCM) - integrating social, environmental, and economic goals into the planning process (Gracia, Quezada, 2016), b) governance structures - establishing governance frameworks to oversee the integration and execution of plans (Mc Loughlin, 2023),
- organizational structure and competencies – among others: key roles and functions - defining roles and functions that facilitate integration and collaboration across the organization, b) capability overlap - ensuring that key functions have overlapping capabilities to enable seamless integration (Kepczynski et al., 2018b).

The Sales and Operations Planning (S&OP) plays a crucial role in the Integrated Business Planning (IBP) process by ensuring alignment between various business functions and the overall strategic goals of the organization. Here are the key roles and contributions of S&OP in IBP:

- alignment of strategic and operational plans - S&OP bridges the gap between the strategic plan and daily operational plans, facilitating the alignment of demand and supply for products. This ensures that the company's long-term strategy is consistently reflected in its day-to-day operations (Fakhry et al., 2024; Tuomikangas, Kaipia, 2014),
- cross-functional integration - it improves integration and communication between different business functions such as sales, marketing, finance, and operations, aligning them into one cohesive set of plans. This cross-functional collaboration is essential for achieving corporate performance targets (Danese et al., 2018; Ohlson et al., 2022),
- visibility and accountability - S&OP provides visibility into the business, helping stakeholders understand the balance between supply and demand. It also establishes greater accountability by holding the operational team to a common set of objectives (Affonso, 2008),
- decision-making and resource allocation - the process enables decision-makers to reach consensus on a single operating plan that allocates critical resources effectively. This consensus-driven approach ensures that all departments are working towards the same goals (Chiappinelli, 2008),
- risk management - in dynamic and volatile business environments S&OP incorporates uncertainty management strategies to address unpredictable factors like demand fluctuations and supply disruptions. This risk-focused approach helps organizations navigate complexities and maintain competitiveness (Fakhry et al., 2024).

IBP process is yet something more than just S&OP process; it includes inventory optimization and more over assumes integration with Finance and other functions like Product and Portfolio management, Marketing and Procurement. As such, Olivier Wight sees the IBP process as key process connecting operations to strategy of the organization (Palmatier, Crum, 2013) (Figure 1).

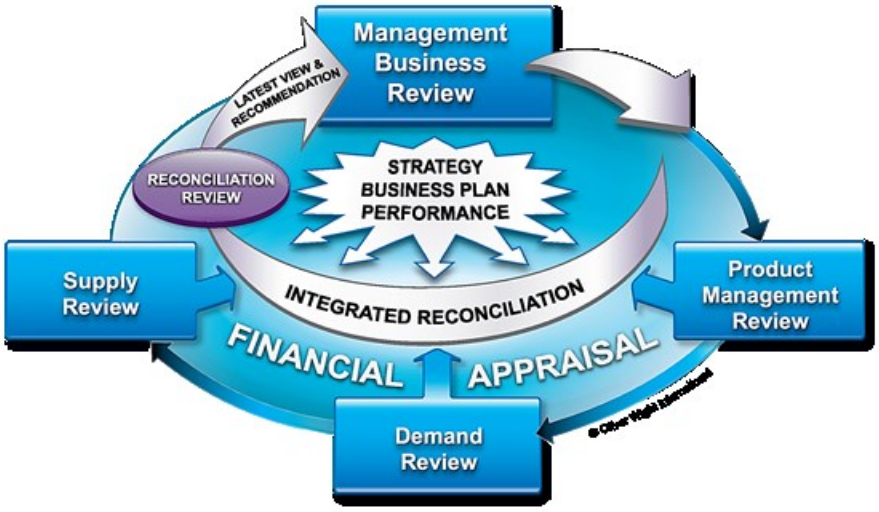

Figure 1. Olivier White's Integrated Business Planning process.
Source: Palmatier, Crum, 2013.

Implementing IBP can be fraught with challenges and mistakes. Based on the literature review, several common pitfalls can be identified: misalignment with organizational structure and culture (Morton, Hu, 2008; Ravasan et al., 2015), inadequate strategic planning (Gulledge et al., 2005), poor planning and execution (Peci, Vazan, 2014), failure to address misalignments (Wei et al., 2005), lack of management education and support (Cunningham, 2004), ignoring post-implementation issues. Critical success factors for IBP implementation encompass top management involvement, vendor support, and the presence of a champion, among others (Ramayah et al., 2007; Bradley, 2008).

2. The IBP frame work

Independently how IBP is called in different organizations, it normally consists of the below steps:

- product management review,
- demand planning,
- inventory planning,
- supply planning,
- reconciliation review,
- pre- S&OP meeting,
- management business review.

First step of IBP process should be Product management review. In this step all the assumptions for future demand are gathered and documented; the assumptions are mainly related to strategical inputs from the market and product life cycle management. This step is often mentioned as the step differentiating S&OP process from IBP process.

The next step is demand planning, where the actual forecasting happens. Forecasted volumes are then reviewed and verified with each market finally should be acknowledged with head of sales. Once the forecasted volumes are agreed and signed-off by the sales, they are the input to the next steps of the process. Next step of the process is Supply Planning including inventory planning. In the inventory planning the main goal is to set up needed inventory levels to secure the expected demand with requested service level. In this step plan for every part is decided resulting in materials management strategy. Once this is done the supply planning step is starting, the demand is distributed throughout the supply chain resulting in supply plan for every step of the supply chain. Main goal here is to secure that supply is able to secure needed demand. That is why rough cut capacity planning is done. At this step potentially the demand is constrained by e.g. capacity limitations or supply limitations. All the issues identified in supply planning step should be gathered, prioritized and solved or raised during the management review step.

After supply planning phase integrated reconciliation step is performed. This step is needed to align potentially three different plans: demand plan, constrained demand plan with financial plans. All gaps should be understood and documented.

The process is regular monthly and always should include all the steps. It results with one set of the data aligned with all the functions – it should be one single source of the truth.

There are various benefits of having IBP process in place. First and most important to be proactively prepared for evolving customer needs. The companies want to foresee what the customers will buy and prepare whole supply chain for this volumes. In order this happens it must be ensured that the plan is realistic. This is why the unconstrained demand plan gets often constrained and feedback is given to the sales that some of potential sales cannot be fulfilled, what protects the customers from delays. IBP process is also helping to efficiently manage change: different scenarios are analyzed beforehand so that the supply chain is prepared to catch opportunities and minimize negative impact in case of any negative changes. Maybe the most important benefit of having the IPB process in place it supports and measures business plan i.e. it is a tool to deploy the strategy. And last but not least benefit of IBP: it helps to build the team work, by removing the silos and helping to take global decision towards the same goal.

As all the processes, also IPB process 3 pillars: people, process, technology.

3. Case study

3.1. Before implementation

The company described in the paper is an international global company operating in the HVAC business. The scope of the implementation was one of the 5 sectors. This sector accounts for about 20% of the overall company's revenue and has strategical target of organic growth of 5% yearly mainly on the project driven products. This ambitious target created need of improved dialogue between operations and sales to identify and catch all growing opportunities.

The supply chain of this sector is presented on figure **Błąd! Nie można odnaleźć źródła odwołania.**2 and consists of 2 central hubs in 2 European countries and 3 supporting warehouses in 3 non-EU countries delivering the goods to 30 sales offices covering above 50 countries. The goods are produced by 4 factories located in 4 EU countries.

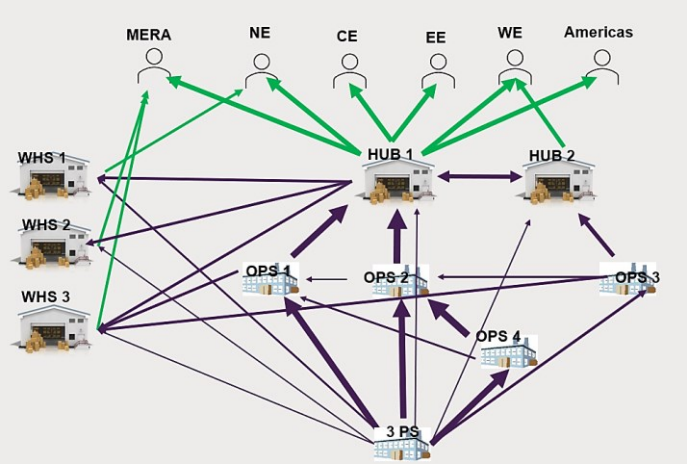

Figure 2. Supply Chain of the Sector covered by implementation.

Source: own research.

Before start of the project described in this paper the company had problems with meeting the budgeted revenue, additionally there were problems with transparency and difficulties with connecting sales figures to the factory plans. As source of the problems the management indicated poor S&OP process. There was already a S&OP process lead by Supply Chain with demand planning team yet monthly meetings were not held and there was no connection to financial forecasting process. As the root cause of such situation many stakeholders indicated the lack of IT tool. In such complex organization, multiple excel spreadsheets were not connected and as a consequence the process could not be properly executed. At that point of time the decision was taken to implement the IT tool to support the process.

Before doing that, the company has performed a survey to judge the company's process maturity, this survey showed that we are on the basic or survival mode in the IBP process. The company's management had the ambition to be on the advanced or best in class level.

The results of this survey and the goal the company has set before the implementation are shown on 3. Bottom line is the maturity level at the Company in 2021, before the implementation the top line is the expected state after the implementation.

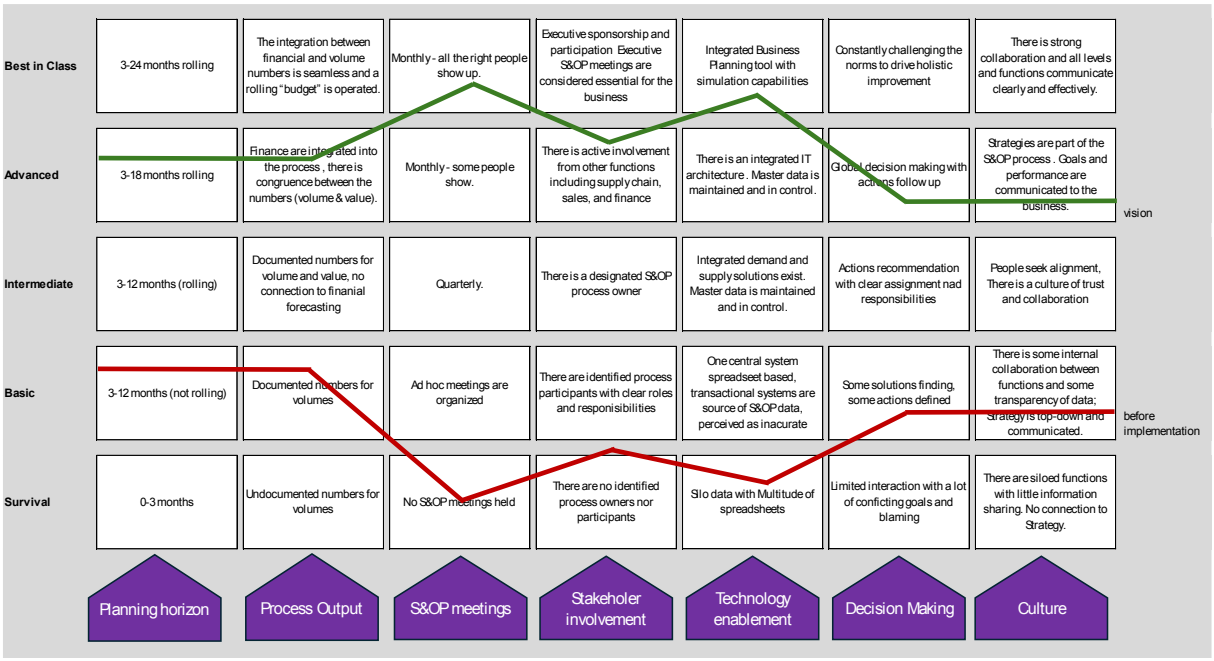

Figure 3. IBP process maturity level Survey.

Source: own elaboration.

3.2. Scope of the implementation

As described before, the scope of the project did cover one sector of the Company with quite complicated supply chain visualized on figure 2. This part of the company delivers about ~15000 SKU's of Finished goods divided into 3 product groups, 110 subgroups; in active bom's there are ~30 000 Components, semi-finished goods and raw materials delivered by ~450 Suppliers; in the 3 factories there are ~700 Workcenters located in 40 production cells.

As the technology enablement was identified as the area being the root cause of the poor IBP/S&OP process, the Company decided to run one project dedicated both to:

- implement IT tool to support the process,
- develop existing S&OP process and transform it to IBP process.

The IT tool was selected before starting the project. It was dedicated tool from one of the leading providers: SAP IBP. The expectations were that this choice should help to improve the process as implementation partner should have some benchmarks and standard solutions.

On Table 1 initial project plan is shown. The expected project duration was 1 year, this included both: IT tool implementation and S&OP process improvement and transformation into IBP Process. The project plan (shown on Table 1) was split into phases (sprints) following steps of the S&OP process.

Table 1.
Initial project plan with deliverables

Timeline	Project phase	Deliverables
2022 January	Kick-off	High level requirements Project team
2022 March	Preparation	To-be process map Mock up's
2022 June	Demand planning	Capture forecast from customers Forecast review with countries Final demand plan signed off by head of sales
2022 July	Inventory optimization	Plan for every part Safety stock levels
2022 September	Supply planning	Finished goods supply plan Rough cut capacity planning Inventory level projection
2022 December	S&OP fine tuning and transformation to IBP	Executive meetings

Source: own elaboration.

Each sprint was split into the following parts:

- to be detailed process design: this phase included detailed user stories build that were later used for testing,
- build phase- phase where IT system was adopted to the requirements stated in previous step,
- play back- step where the solution was presented by the implementation company in the testing environment,
- user acceptance testing – step were the key users tested the system and approved or rejected the solution,
- cut over – step were the tested solution was promoted to life environment,
- go live & hypercare - start of the life environment.

3.3. Project implementation

The project did kick-off as planned, the aim of first phase was to be ready with demand planning process using the tool within 6 months. As mentioned before, the company had before the project start team responsible for S&OP process, so naturally all of team members were chosen as key users for the project. On top of it steering committee was organized. The steering committee consisted of: Supply Chain manager, Head of Sales, Head of Procurement and Financial controller. The project managers were appointed both: on implementation company side and business side. The project meetings were held weekly for team members, monthly with steering committee.

Preparation phase was finalized with some delay. Main challenge noticed here were lack of interest of steering committee. Still the main focus was kept on the IT tool, not the process, so the lack of engagement of other than supply chain functions was not considered as a show stopper at this moment. The project was continued.

Next Sprint was dedicated to demand planning phase. The expected deliverable of this step was the demand plan for all the countries signed off by Head of sales. SAP IBP tool was great support in this phase as its advanced statistical tools give possibility of using historical data. This was not yet fully utilized as many of the users were attached to previous process, where a lot of manual interventions happened. The requirements from the core team were to have a process very similar to the one that was already existing. This caused many customizations leading to much more efforts on IT side and too little focus on process part including engagement of the sales team that was to be end users of the process. The result of many customizations of the SAP IBP tool lead to very complex process, not easy to understand by the stakeholders. On top of this many problems with integration of the SAP IBP with existing other IT systems in the company were noticed (figure 4).

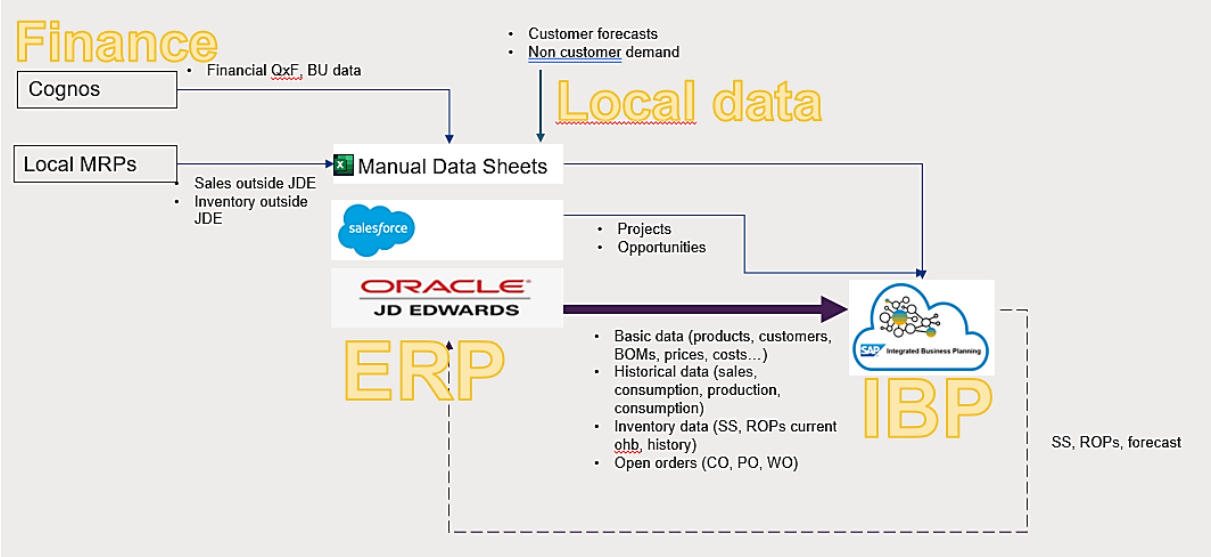

Figure 4. Connection between IT systems.

Source: own elaboration

As shown on Figure 4, main source of master and transactional data was Company's ERP system. The data flows were designed to be automatic with weekly or monthly frequency. This taking into consideration the nature of the S&OP process is satisfactory frequency. Mapping of the master data used in first sprint (products, customers, prices) was not as easy as initially forecasted. This was caused mainly by complexity of the supply chain and mistakes or missing data in source system. Transactional data mapping was also difficult due to the fact that some flows were covered outside main ERP system, what created the need of many workarounds. As the result of the above the project in this step was seriously delayed. The tests done by key users with not complete data were not fully reliable and next few months were

spent on gap closures until the demand planning phase could be fully closed. As a lesson learned from this step the team managers decided to appoint one key user to be responsible for data integration.

The next step, Inventory planning phase, was considered before the implementation as an easy one. The project had dedicated and educated key users and the functionality of safety stock calculations was well understood. Yet main challenge encountered on this step was bad forecast accuracy in first months of the demand planning implementation. This was resulting in too high safety stock calculations not possible to execute in real life. It resulted in the situation, where the process was executed by the users yet did not lead to business decision, creating confusion on all levels.

When starting Supply planning phase, the Company decided to use more agile approach resulting in 2 steps:

- implementation of standard functionality of IT system,
- adding necessary customization.

This approach led to limited number of customizations and much smoother testing phase. Also the understanding of the process by key users and end users was on satisfactory level. This was considered as a success. The main challenge identified in this step was too low engagement of executives. This problem, although visible from the beginning of the project, at this stage was a showstopper. Due to lack of support of the management, the execution of the supply plan was not sufficient resulting with big deviations between plan and actuals. The supply plan created in the process was not written back to the company's ERP system. This situation resulted in low engagement of the team members and difficulties to understand the capacity issues occurring, yet not visible beforehand, what is one of the biggest benefits to have S&OP planning. On top of this, the not satisfactory level of master data noticed already in demand planning phase, at this stage of the project, created many problems and led to need of master data cleaning activities. This was time consuming and not planned.

It was after finishing supply phase, when the Company started the S&OP meetings. When having the financial representative on board, another requirements to the process were stated. The connection to financial planning was next challenge, not being clear when starting the process. This is why the project was expanded to cover also this requirement. Fortunately this was a breaking point in the project. Finally the executive team started to gain interest some in the process and even though it required more work on IT side, the benefits of the process were started to be acknowledged.

On Table 2 the actual timeline of the project is shown. As already indicated above, the project did not finish on time.

Table 2.
Actual project timeline with comparison

Original Timeline	Actual Timeline	Project phase	Deliverables
2022 January	2022 January	Kick-off	High level requirements Project team
2022 March	2022 April	Preparation	To-be process map Mock up's
2022 June	2022 August	Demand planning	Capture forecast from customers Forecast review with countries Final demand plan signed off by head of sales
2022 July	2022 September	Inventory optimization	Plan for every part Safety stock levels
2022 September	2023 May	Supply planning	Finished goods supply plan Rough cut capacity planning Inventory level projection
	2023 September	Budgeting	Financial forecast
2022 December		S&OP fine tuning and transformation to IBP	Executive meetings

Source: own elaboration.

After closing the project, the Company conducted again the self-assessment for IBP process maturity level. The results are visible on figure 5.

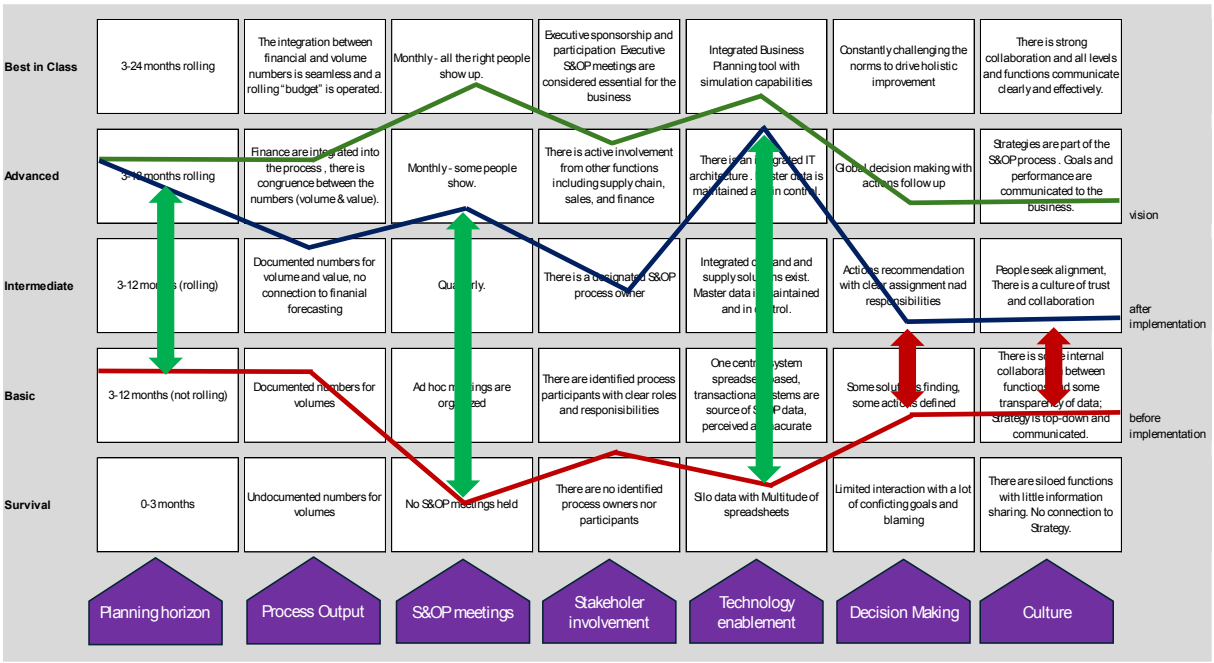

Figure 5. IBP process maturity level after project closure.

Source: own elaboration.

Main progress was made in the technology enablement area. This indicates partial success of the project, specifically the project part focused on IT side of the process. Also in all other areas the progress is visible. Analyzing the results of the self-assessment, the Company stated that the foundations for IBP process were set. Yet the process did not yet transform into IBP as very little progress was noticeable in the three key areas differentiating S&OP process from IPB process, i.e. Stakeholder involvement, Decision making and Culture.

Even though from time line perspective the described project was not fully successful, yet the company learned a lot and continues journey towards fully working IBP process. Main changes implemented afterwards were personal changes in the executive team to gain more support for the process and reinforce global decision making. Next step was to drive the execution of the supply plan into the operational planning. This two steps in Authors view, will drive the IBP process in described Company towards full success.

Guidelines that the authors would give for similar projects, based on lessons learned from the described project are:

- gain executive support,
- use more agile approach: each step of the process should be split into: standard functionality delivery and customization delivery,
- clear responsibility for the data from day 1,
- wait with inventory process until the forecast accuracy is on acceptable level,
- start S&OP meetings even though not full process ready to gain engagement of the team and executives.

4. Conclusions

To summarize, the main reasons of not fully successful implementation of the process in the organization the authors would identify in the:

- lack of executive support,
- no strict execution of the S&OP supply plans,
- too big focus on technology and too low focus on process.

From a perspective, the change management process was the weakest point of the implementation. Although we can state that the 8 steps of Kotter's model were considered when starting the projects by creating sense of urgency, forming a guiding coalition and creating and communicating vision of change, yet during the implementation, the next steps of the change model were neglected. As stated before, first step of the project was not successful, the short term wins, even if existed, were not broader communicated, also the empowering was not fully

in place, mainly due to the lack of competence on the key users side. Mentioned problems were not addressed and lead to lost "momentum".

The nature of the IBP process is cross functional dialogue resulting with global decision making. In order to reach this the S&OP meetings (or rather executive review meetings) should happen as soon as possible even if not all the data or steps of the process are ready. The Integrated Business Planning process is not a supply chain process it is the process connecting Supply Chain to other functions resulting in delivering the strategy and as such it should not just be used but should be driven by Executives.

Even though the above is known and described broadly in the literature, still, as in the example described in the paper, the companies try to have the S&OP process driven on supply chain side. According to the survey conducted in 2020 by Oliver Wight 65 percent of total 125 respondents failed involve their executives in the IBP process (Matthews, 2020). This according to Oliver Wight and many others must lead to a poor process not delivering expected results.

Effective implementation of S&OP requires organizational integration, standardized processes, and strong engagement from all departments. These factors contribute to enhanced operational, market, and profitability outcomes (Swaim, 2016). The most errors are due to separation IBP and S&OP in the day-to-day operations of many companies.

In summary, S&OP should be integral to the IBP process, providing alignment, visibility, accountability, and effective resource allocation while managing risks and leveraging technological tools to overcome challenges.

The conclusions drawn by the authors are generally in line with those drawn from the literature analysis. A methodical approach that offers companies a structured framework for key integration phases and milestones is essential for successful IBP implementation. Taking into account various critical success factors throughout the IBP implementation lifecycle helps minimize the risk of failure. To support this, a critical success factor framework can be applied within an integrated enterprise systems implementation model, particularly in collaborative manufacturing environments.

References

1. Affonso, R., Marcotte, F., Grabot, B. (2008). Sales and operations planning: The supply chain pillar. *Production Planning and Control, Vol. 19, Iss. 2*, pp. 132-141, doi: 10.1080/09537280801896144.
2. Aguirre-Mayorga, H.S., Carreno-Vargas, J.E., Vega-Mejía, C.A., Castellanos-Arias, J.S., Hernanaez-Martinez, Y.P. (2012). Evaluation of integration approaches between ERP and BPM systems. *Ingenieria y Universidad, Vol. 16, Iss. 2,* pp. 415-431.
3. Basavaraju, K., Fatahi Valilai, O. (2025). Developing a demand planning strategy for joint forecasting and employing analytical tool in an empirical case study. *Discover Applied Sciences, Vol. 7, Iss. 4, No. 345*, pp. 1-21, doi: 10.1007/s42452-025-06740-9.
4. Bradley, J. (2008). Management based critical success factors in the implementation of Enterprise Resource Planning systems. *International Journal of Accounting Information Systems, Vol. 9, Iss. 3*, pp. 175-200, doi: 10.1016/j.accinf.2008.04.001.
5. Chen, M.-C., Yang, T., Li, H.-C. (2007). Evaluating the supply chain performance of IT-based inter-enterprise collaboration. *Information and Management*, *Vol. 44, Iss. 6*, pp. 524-534, doi: 10.1016/j.im.2007.02.005.
6. Chiappinelli, C. (2008). Back to reality. *Managing Automation, Vol. 23, Iss. 3*, pp. 34-37.
7. Cunningham, P. (2004). Back-to-basics in ERP HR implementations. *World Review of Science, Technology and Sustainable Development, Vol. 1, Iss. 2*, pp. 209-213, doi: 10.1504/WRSTSD.2004.005516.
8. Danese, P., Molinaro, M., Romano, P. (2018). Managing evolutionary paths in Sales and Operations Planning: key dimensions and sequences of implementation. *International Journal of Production Research, Vol. 56, Iss. 5*, pp. 2036-2053, doi: 10.1080/00207543.2017.1355119.
9. Fakhry, D., Oger, R., Lauras, M. (2024). Towards a Risk-Focused Sales and Operations Planning Process. *Lecture Notes in Networks and Systems*, *Vol. 1104,* LNNS, pp. 236-245, doi: 10.1007/978-3-031-68628-3_23.
10. Gracia, M.D., Quezada, L.E. (2016). A framework for strategy formulation in sustainable supply chains: a case study in the electric industry. *Economic Research and Electronic Networking*, *Vol. 17, Iss. 1*, pp. 3-27, doi: 10.1007/s11066-015-9098-3.
11. Gulledge, T.R., Sommer, R.A., Vincent, J.P. Jr. (2005). An introduction to basic enterprise resource planning concepts. *International Journal of Management and Enterprise Development, Vol. 2, Iss. 2*, pp. 204-218, doi: 10.1504/IJMED.2005.006311.
12. Ivanisevic, A., Losonc, A., Radisic, M., Njegovan, M., Pavlovic, A. (2020). Development of an effective planning model for improving financial performance. *Forum Scientiae Oeconomia, Vol. 8, Iss. 1,* pp. 67-81, doi: 10.23762/FSO_VOL8_NO1_5.

13. Kepczynski, R., Jandhyala R., Sankaran, G., Dimofte, A. (2018a). Recent Past Disconnected Planning. *Management for Professionals, No. F626*, pp. 1-8, doi: 10.1007/978-3-319-75665-3_1.
14. Kepczynski, R., Jandhyala R., Sankaran, G., Dimofte, A. (2018b). What Makes Integrated Business Planning. *Management for Professionals, No. F626*, pp. 31-72, doi: 10.1007/978-3-319-75665-3_3.
15. Kotter, J.P. (2012). *Leading Change.* Harvard Business Review Press.
16. Matthews, J.D. (2020). *Is Your S&OP or IBP Process Delivering the Results You Expected?* Retrieved from: https://oliverwight-eame.com/uploads/white-papers/ibp/pdf/resources-white-papers-IBP-Is-your-s%26op-process-delivering-document-aug-2020.pdf, 10.05.2025.
17. Mc Loughlin, K., Lewis, K., Lascelles, D., Nudurupati S. (2023). Sustainability in supply chains: reappraising business process management. *Production Planning and Control, Vol. 34, Iss. 1.* pp. 19-52, doi: 10.1080/09537287.2021.1884764.
18. Morton, N.A., Hu, Q. (2008). Implications of the fit between organizational structure and ERP: A structural contingency theory perspective. *International Journal of Information Management, Vol. 28, Iss. 5.* pp. 391-402, doi: 10.1016/j.ijinfomgt.2008.01.008
19. Ni, Q., Yarlagadda, P.K.D.V., Lu, W.F. (2006). Modeling of an Integrated Process Planning System. *Computer-Aided Design and Applications, Vol. 3, Iss*. 5, pp. 567-576, doi: 10.1080/16864360.2006.10738410.
20. Ohlson, N.-E., Riveiro, M., Bäckstrand, J. (2022). Identification of Tasks to Be Supported by Machine Learning to Reduce Sales & Operations Planning Challenges in an Engineer-to-Order Context. *Advances in Transdisciplinary Engineering, Vol. 21*, pp. 39-50, doi: 10.3233/ATDE220124.
21. Palmatier, G.E., Crum, C. (2013). *The Transition from Sales and Operations Planning to Integrated Business Planning.* Oliver Wight International. Retrieved from: http://georgepalmatier.com/white-papers/transition-sop-ibp-palmatier.pdf 10.05.2025.
22. Peci, M., Vazan, P. (2015). The biggest critical failure factors in ERP implementation. *Applied Mechanics and Materials, Vol. 519-520*, pp. 1476-1480, doi: 10.4028/www.scientific.net/AMM.519-520.1476.
23. Puschmann, T., Alt, R. (2004). Enterprise application integration systems and architecture – the case of the Robert Bosch Group. *Journal of Enterprise Information Management, Vol. 17, Iss. 2*, pp. 105-116, doi: 10.1108/17410390410518754.
24. Ramayah, T., Roy, M.H., Arokiasamy, S., Zbib, I., Ahmed, Z.U. (2007). Critical success factors for successful implementation of enterprise resource planning systems in manufacturing organisations. *International Journal of Business Information Systems, Vol. 2, Iss. 3*, pp. 276-297, doi: 10.1504/IJBIS.2007.011980.

25. Ravasan, A.Z., Nabavi, A., Mansouri, T. (2015). Can organizational structure influence ERP success? *International Journal of Information Systems and Supply Chain Management, Vol. 8. Iss. 1,* pp. 39-59, doi: 10.4018/ijisscm.2015010103.
26. Smith, C. (2004). Connecting the dots. *InTech., Vol. 51, Iss. 11,* pp. 45-48.
27. Swaim, J.A., Maloni, M., Bower, P., Mello, J. (2016). Antecedents to effective sales and operations planning. *Industrial Management and Data Systems, Vol. 116, Iss. 6*, pp. 1279-1294, doi: 10.1108/IMDS-11-2015-0461.
28. Tuomikangas, N., Kaipia, R. (2014). A coordination framework for sales and operations planning (S&OP): Synthesis from the literature. *International Journal of Production Economics, Vol. 154*, pp. 243-262, doi: 10.1016/j.ijpe.2014.04.026.
29. Wei, H.-L., Wang, E.T.G., Ju, P.-H. (2005). Understanding misalignment and cascading change of ERP implementation: A stage view of process analysis. *European Journal of Information Systems, Vol. 14, Iss. 4*, pp. 324-334, doi: 10.1057/palgrave.ejis.3000547.