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Performance Evaluation of Baosight Software's Digital-Intelligent Transformation based on E-BSC

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Abstract

Using Baosight Software as a single case, this study examines how the performance of digital-intelligent transformation can be assessed in an industrial software enterprise. The traditional Balanced Scorecard (BSC) is kept as the basic framework, but it is not fully sufficient for this case, because platform construction, software product restructuring, AI applications, and technological output are central parts of the transformation. A digital-intelligent capability dimension is therefore added, forming a five-dimensional Enhanced Balanced Scorecard (E-BSC). Based on public materials, indicators for 2020-2025 are collected; the CRITIC method is used to determine objective weights; and composite and dimensional scores are calculated through weighted scoring. The results are not a simple story of steady improvement. After Baosight Software released its Digital-Intelligent Transformation Plan (2022-2024), the composite score increased during 2022-2024 and reached its highest value in 2024. It then dropped noticeably in 2025. The decline was mainly associated with adjustment in the downstream steel industry, higher customer concentration, project recognition timing, and weaker profitability. Dimensional scores offer a clearer reading of this change. The financial, customer, and internal process dimensions weakened in 2025, while learning and growth and digital-intelligent capability stayed at high levels. In other words, the company was still accumulating technology, talent, and platform capability, but these inputs had not yet been fully converted into financial results. For industrial software enterprises, transformation performance should be interpreted together with financial outcomes, technological accumulation, customer structure, and external industry conditions.

Keywords

Baosight Software; Digital-Intelligent Transformation; E-BSC; CRITIC Method; Performance Evaluation.

1. Introduction

For manufacturing enterprises, digital-intelligent transformation is not simply the act of adding new technologies to existing production systems. More importantly, it changes how data resources, software systems, platforms, technical staff, and business processes are organized around production and service activities [1, 2]. Industrial software is closely tied to this change. Its role has moved beyond software development and project implementation, and now extends to industrial internet platforms, intelligent manufacturing solutions, and continuing operation and maintenance services [3]. In recent years, many Chinese industrial software enterprises have increased R&D spending, built platforms, and adjusted product portfolios. The difficult point is that these inputs are not always reflected in profit immediately. A company may be improving its technical base at the same time that downstream customers slow

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investment, customer structure changes, or project acceptance is delayed. Revenue growth and profitability may then weaken, although transformation-related capability is still being formed. This is why a one-year financial result is too narrow to judge the quality of transformation.

Baosight Software offers a useful case for observing this tension. Its business is closely connected with industrial software, industrial internet platforms, intelligent manufacturing, and artificial intelligence applications. The company has served steel and other large process-industry customers for many years. This gives it rich industrial scenarios, but it also links part of its performance to the investment rhythm of those customers. In recent years, Baosight Software has promoted platform construction, restructured core industrial software products, developed independently controllable product systems, and expanded AI-related applications. The path is typical for industrial software enterprises: capability is built in advance, and the conversion into revenue and profit depends on project delivery, customer budgets, and repeated product application. Based on this case, this study evaluates Baosight Software's digital-intelligent transformation performance from 2020 to 2025 by using E-BSC, the CRITIC method, and weighted composite scoring. The numerical results are then read together with major transformation events and changes in the business environment.

2. Case Background

Overview of Baosight Software

Baosight Software is a listed company with an important position in China's industrial software and industrial internet fields. Its business covers industrial software products, intelligent manufacturing solutions, information system integration, industrial internet platforms, and continuing operation and maintenance for steel and other large process-industry enterprises. It is different from a standard packaged-software firm. Many projects depend on specific industrial scenarios, long implementation cycles, and stable service relationships with key customers. As manufacturing enterprises demand more intelligent upgrading, the company has moved from a mainly information-system delivery model toward productization, platformization, and continuing services. This makes the case suitable for examining both sides of transformation: digital-intelligent capability is being accumulated, but commercialization, project delivery, and customer concentration still bring pressure.

Table 1. Main milestones in Baosight Software's digital-intelligent transformation

Time	Main content
2020	Based on its industrial software, intelligent manufacturing, and information service businesses, the company continued to serve steel and other large process-industry customers, accumulating customer scenarios and technical foundations for later transformation.
2021	The company promoted digital transformation and built the Digital Baosight management system based on the Baoliandeng xIn3Plat industrial internet platform.
January 2022	The company released the Baosight Software Digital-Intelligent Transformation Plan (2022-2024), and the transformation entered a more planned and systematic stage.
2023-2024	The company promoted industrial internet platform construction, the restructuring of core industrial software products, independently controllable products, and artificial intelligence applications.
2025	Phased results were achieved in industrial large models and intelligent applications for the steel industry.

The transformation of Baosight Software did not come from one isolated technology. It unfolded through several connected steps, including organizational preparation, strategic

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planning, platform construction, product restructuring, and intelligent application. In 2021, the company promoted digital transformation and built the Digital Baosight management system on the Baoliandeng xIn3Plat industrial internet platform. In January 2022, it released the Baosight Software Digital-Intelligent Transformation Plan (2022-2024), which made the transformation path clearer. During 2023-2024, the company continued to develop the industrial internet platform and restructured core industrial software products such as MES, ERP, APS, and EAM. Independently controllable products and artificial intelligence applications were also promoted. By 2025, phased results had appeared in industrial large models and intelligent applications for the steel industry. Based on this process, the paper treats 2020-2021 as the business foundation and digital preparation stage, 2022-2024 as the planning and implementation stage, and 2025 as the stage in which the transformation was tested under industry downturn pressure.

3. Performance Evaluation of Baosight Software's Digital-Intelligent Transformation Based on E-BSC

3.1. Construction of the E-BSC indicator system

3.1.1. Traditional Balanced Scorecard

The Balanced Scorecard (BSC), proposed by Kaplan and Norton, links financial and non-financial indicators within one evaluation framework. Its traditional structure contains four dimensions: financial, customer, internal process, and learning and growth. The financial dimension focuses on operating results and capital efficiency. The customer dimension looks at market performance and customer relationships. The internal process dimension concerns operating efficiency and process management, while learning and growth relates to talent, organizational learning, and long-term development capability. Compared with a single financial indicator, BSC allows current results and later development conditions to be considered together.

This broader view is necessary when digital-intelligent transformation is evaluated. Revenue, profit, and return indicators can show whether current operations are under pressure, but they cannot fully describe changes in customer scenarios, platform functions, software products, data resources, or R&D teams. In industrial software enterprises, many transformation activities are project-based and capability-oriented. Their effects may first appear in product architecture, delivery experience, or technical teams. Only after products are replicated or services continue for a longer period can these changes be reflected more clearly in financial results.

The traditional BSC still needs adjustment for this case. Baosight Software's digital-intelligent transformation is reflected in industrial internet platform construction, core software product restructuring, independently controllable products, AI applications, and technological achievements. These elements are not merely ordinary process improvement, nor can they be fully treated as general employee development. If they are all placed under internal process or learning and growth, the platform and technology capability of an industrial software enterprise will not be sufficiently visible. This study therefore adds a digital-intelligent capability dimension, so that technological capability, platform capability, and innovation output can be assessed more directly [1, 2].

3.1.2. Design of the Enhanced Balanced Scorecard

The E-BSC framework used here is built around Baosight Software's transformation process. The evaluation object is not general business performance, but digital-intelligent transformation performance from 2020 to 2025. Revenue and profit remain necessary because transformation ultimately has to face the market. At the same time, customer structure, process

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efficiency, talent input, and digital-intelligent capability also need to be included. On the basis of the four traditional BSC dimensions, the added digital-intelligent capability dimension covers industrial internet platforms, software and technical services, transformation-related disclosure, and technological innovation output. The indicators are selected according to three practical considerations: relevance to the case, clarity of interpretation, and availability from public sources such as annual reports, announcements, intellectual property information, and annual-report text.

The final E-BSC system contains five dimensions. The financial dimension is used to evaluate operating outcomes and financial risk. The customer dimension observes customer structure, collection efficiency, and order foundations. The internal process dimension focuses on expense control and asset operation. The learning and growth dimension reflects R&D input and the talent base. The added digital-intelligent capability dimension examines the commercialization of related business, the intensity of transformation disclosure, and technological innovation output. This design keeps the basic logic of BSC, while giving Baosight Software's technological and platform features a clearer place in the evaluation.

3.1.3. Indicator Construction

The financial dimension describes operating results during the transformation period. Five indicators are selected: operating revenue growth rate, net profit margin on sales, return on equity, gross profit margin, and asset-liability ratio. Operating revenue growth rate reflects growth capability. Net profit margin on sales, return on equity, and gross profit margin observe profitability from different angles. The asset-liability ratio is included because financial risk may affect the sustainability of transformation. These indicators cannot cover the whole transformation process, but they help judge whether capability building is accompanied by sound financial performance.

The customer dimension focuses on customer relationships and the order base. Industrial software enterprises usually work with large process-industry customers through projects and continuing services. A stable customer base can bring application scenarios and repeated orders. Too much concentration, however, may make performance more sensitive to a single industry or a few major customers. This paper therefore selects the sales share of the top five customers, accounts receivable turnover, and contract liabilities as a percentage of operating revenue. These indicators describe customer concentration, collection efficiency, and the order foundation behind transformation performance [4].

The internal process dimension concerns operating efficiency and expense control. For Baosight Software, platform construction and product restructuring require continuous input. Project delivery and service capability still affect revenue recognition and asset turnover. The selling expense ratio, administrative expense ratio, and total asset turnover are selected for this dimension. They respectively describe market development costs, organizational management efficiency, and asset operation efficiency [3].

The learning and growth dimension is used to observe the conditions that support longer-term development. Industrial software enterprises rely heavily on R&D investment and technical personnel. Without continuous R&D input and a stable technical team, platform upgrading, product restructuring, and AI application would be difficult to sustain. This dimension uses R&D intensity, the proportion of R&D personnel, and the proportion of employees with bachelor's degrees or above. These indicators are not direct financial results. They are used to judge whether the company has maintained the human and knowledge base needed for transformation.

The added digital-intelligent capability dimension captures capability building and technological output that are difficult to show through the traditional four dimensions. Three indicators are included: the share of software and technical service revenue, digital-intelligent

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transformation text disclosure intensity, and the number of invention patent applications. The first is related to the commercialization of digital-intelligent-related business. The second reflects the intensity of transformation-related disclosure in annual reports. The third observes technological innovation output.

Digital-intelligent transformation text disclosure intensity is calculated from the company's annual reports. It does not replace business or financial indicators. Instead, it offers a supplementary view of how often the company discusses transformation-related themes in formal disclosure. Considering Baosight Software's industrial software background, the keyword dictionary includes digital-intelligent, digital transformation, industrial internet, intelligent manufacturing, smart manufacturing, Baoliandeng, xIn3Plat, artificial intelligence, AI, and data governance. The total frequency of these keywords is counted in the full text of the annual reports from 2020 to 2025. To reduce the influence of report length differences and possible extreme values, the total frequency is transformed with the natural logarithm:

$$T = ln(1 + F) \quad (1)$$

where T denotes the digital-intelligent transformation text disclosure intensity, and F denotes the total frequency of the selected keywords in the annual report.

Table 2. Evaluation indicator system for Baosight Software's digital-intelligent transformation performance

Dimension	Indicator	Calculation method	Attribute
Financial (A)	Operating revenue growth rate	(Current operating revenue - prior operating revenue) / prior operating revenue	Positive
	Net profit margin on sales	Net profit attributable to the parent / operating revenue	Positive
	Return on equity	Net profit attributable to the parent / average net assets	Positive
	Gross profit margin	(Operating revenue - operating cost) / operating revenue	Positive
	Asset-liability ratio	Total liabilities / total assets	Negative
Customer (B)	Sales share of top five customers	Total sales to the top five customers / operating revenue	Negative
	Accounts receivable turnover	Operating revenue / average accounts receivable balance	Positive
	Contract liabilities to operating revenue	Ending balance of contract liabilities / operating revenue	Positive
Internal process (C)	Selling expense ratio	Selling expenses / operating revenue	Negative
	Administrative expense ratio	Administrative expenses / operating revenue	Negative
	Total asset turnover	Operating revenue / average total assets	Positive
Learning and growth (D)	R&D intensity	Total R&D investment / operating revenue	Positive
	Proportion of R&D personnel	Number of R&D personnel / total employees	Positive
	Proportion of employees with bachelor's degrees or above	Employees with bachelor's degrees or above / total employees	Positive
Digital-intelligent capability (E)	Share of software and technical service revenue	Software and technical service revenue / operating revenue	Positive
	Digital-intelligent transformation text disclosure intensity	ln(1 + frequency of annual-report digital-intelligent keywords)	Positive
	Number of invention patent applications	Number of invention patent applications in the year	Positive

3.1.4. Determination of Indicator Weights

After the indicator system is constructed, weights are assigned to the indicators. Weighting can rely on subjective judgment or objective data. Subjective weighting may reflect experts'

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understanding of indicator importance, but it is also influenced by experience and personal judgment. Objective weighting starts from the data itself. Since this study evaluates one company over 2020-2025 and all indicators come from public materials, the CRITIC method is adopted to improve objectivity and reproducibility.

The CRITIC method uses information from contrast intensity and conflict among indicators. Contrast intensity is usually measured by standard deviation. When an indicator changes more sharply across the sample period, it provides stronger distinction among different years. Conflict is reflected by correlations among indicators. If an indicator is weakly correlated with others, it contains less repeated information and adds more independent information to the evaluation. This method fits the present study because some indicators may move together, while others describe different parts of the transformation process.

The original data are first standardized. The indicator system contains both positive and negative indicators, so raw values cannot be compared directly. For positive indicators, a larger value means better performance. The standardization formula is:

$$X'_{ij} = \frac{X_{ij} - \min(X_j)}{\max(X_j) - \min(X_j)} \tag{2}$$

For negative indicators, a smaller value means better performance. The standardization formula is:

$$X'_{ij} = \frac{\max(X_j) - X_{ij}}{\max(X_j) - \min(X_j)} \tag{3}$$

where X_{ij} denotes the original value of the j-th indicator in year i, X'_{ij} denotes the standardized value, and $\max(X_j)$ and $\min(X_j)$ denote the maximum and minimum values of the j-th indicator during the sample period. After standardization, all indicators are transformed so that larger values indicate better performance.

The next calculation concerns the standard deviation and the correlation coefficient of each indicator. Standard deviation captures how much an indicator changes over the six-year period. The correlation coefficient shows whether the information carried by one indicator overlaps with that of another. Let σ_j be the standard deviation of the j-th indicator, and r_{jk} be the correlation coefficient between the j-th and k-th indicators. The information content of the j-th indicator is expressed as:

$$C_j = \sigma_j \sum_{k=1}^{m} (1 - r_{jk}) \tag{4}$$

where m denotes the number of indicators. A larger C_j means that the indicator contains more information and has a stronger influence on the composite evaluation.

The information content of each indicator is then normalized to obtain its weight:

$$w_j = \frac{C_j}{\sum_{j=1}^{m} C_j} \text{ j} \tag{5}$$

Using this procedure, the weights of the evaluation indicators are obtained. These CRITIC weights reflect the information contained in the 2020-2025 sample period. They should not be understood as the permanent theoretical importance of the indicators. With only six annual

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observations, a sharp movement in one year can affect both standard deviations and correlations. Later analysis therefore combines the numerical scores with Baosight Software's transformation events, the downstream steel industry cycle, customer structure changes, and project recognition timing.

Table 3. Indicator weights for Baosight Software's digital-intelligent transformation performance

Rank	Dimension	Indicator	Weight
1	Digital-intelligent capability	Share of software and technical service revenue	0.0737
2	Digital-intelligent capability	Digital-intelligent transformation text disclosure intensity	0.0727
3	Learning and growth	R&D intensity	0.0654
4	Digital-intelligent capability	Number of invention patent applications	0.0646
5	Learning and growth	Proportion of employees with bachelor's degrees or above	0.0642
6	Customer	Contract liabilities to operating revenue	0.0613
7	Learning and growth	Proportion of R&D personnel	0.0593
8	Internal process	Selling expense ratio	0.0589
9	Customer	Accounts receivable turnover	0.0571
10	Internal process	Administrative expense ratio	0.0562
11	Financial	Asset-liability ratio	0.0555
12	Customer	Sales share of top five customers	0.0542
13	Financial	Gross profit margin	0.0533
14	Internal process	Total asset turnover	0.0519
15	Financial	Operating revenue growth rate	0.0509
16	Financial	Net profit margin on sales	0.0505
17	Financial	Return on equity	0.0504

The weight results show differences among the indicators, but the gap is not extreme. At the dimensional level, the financial dimension has a total weight of 0.2605 and remains an important basis for evaluating Baosight Software's transformation performance. The digital-intelligent capability dimension and the learning and growth dimension have weights of 0.2110 and 0.1889, respectively. Together they reach 0.3999. Technological capability, R&D input, and the talent base therefore provide considerable information during the sample period. At the indicator level, the share of software and technical service revenue, text disclosure intensity, R&D intensity, and invention patent applications rank relatively high. This ranking is consistent with the company's emphasis on industrial internet platforms, AI applications, and core software product restructuring.

The financial indicators have relatively close weights. Revenue growth, net profit margin, return on equity, gross profit margin, and asset-liability ratio should therefore be read together rather than separated too mechanically. The customer dimension also deserves attention. Contract liabilities to operating revenue, accounts receivable turnover, and the sales share of the top five customers all have meaningful weights. For an industrial software enterprise, order foundations, collection efficiency, and customer concentration are closely related to operating stability. In the internal process dimension, the selling expense ratio, administrative expense ratio, and total asset turnover have similar weights. Expense control and asset use both matter during the transformation period.

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The CRITIC results still need cautious interpretation. In 2025, Baosight Software experienced clear changes in operating revenue, return on equity, customer concentration, and total asset turnover. Such changes may raise the information content of related indicators in a short sample period. The weights are useful for calculation, but the meaning of the scores should still be read together with the company's operating conditions and the external industry environment.

3.1.5. Calculation of Composite Evaluation Scores

After determining indicator weights, the composite evaluation score for each year from 2020 to 2025 is calculated through weighted scoring. In the calculation, the standardized value of each indicator is multiplied by its corresponding weight, and the weighted values are then summed:

$$S_i = \sum_{j=1}^{m} w_j X'_{ij} \quad (6)$$

where S_i denotes the composite evaluation score of year i, w_j denotes the weight of the j-th indicator, X'_{ij} denotes the standardized value of the j-th indicator in year i, and m denotes the number of indicators. A higher composite score indicates better overall performance in Baosight Software's digital-intelligent transformation.

Dimensional scores are calculated for a different purpose. They help show how each aspect of performance changes over time. Since the number of indicators and total weights differ across dimensions, the weights within each dimension are normalized before the dimensional score is obtained. This treatment does not replace the composite score. It only makes the trends in the financial, customer, internal process, learning and growth, and digital-intelligent capability dimensions easier to compare.

Table 4. Composite evaluation scores of Baosight Software's digital-intelligent transformation, 2020-2025

Year	Composite score	Rank
2020	0.4960	4
2021	0.4524	5
2022	0.5107	3
2023	0.5137	2
2024	0.6043	1
2025	0.4302	6

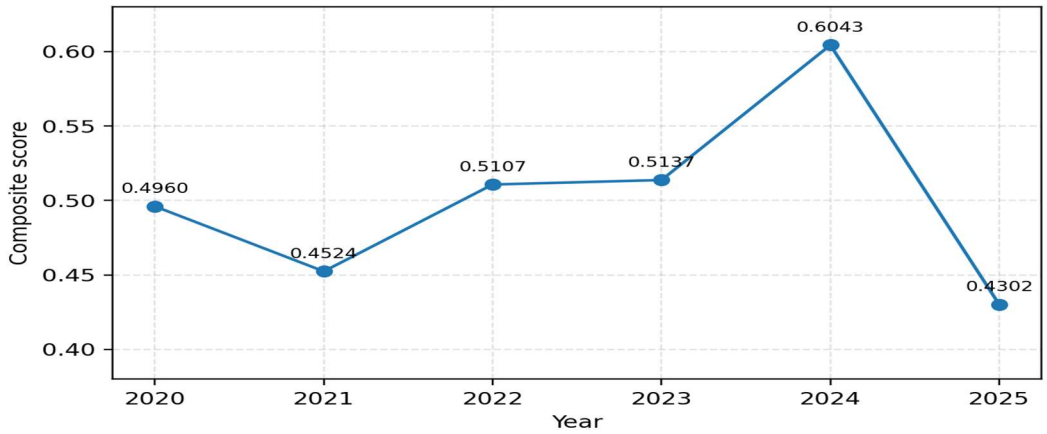

Figure 1. Trend of composite evaluation scores, 2020-2025

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3.2. Performance Analysis of Baosight Software's Digital-Intelligent Transformation

3.2.1. Composite Performance Analysis

The composite scores do not show a straight upward path. The score was 0.4960 in 2020, decreased to 0.4524 in 2021, increased to 0.5107 in 2022, remained close to that level in 2023, and rose to 0.6043 in 2024, the highest value in the sample period. In 2025, it fell to 0.4302. If only the final year is considered, the transformation may appear to have weakened. The dimensional results give a more careful explanation. The decline was mainly concentrated in the financial, customer, and internal process dimensions, while learning and growth and digital-intelligent capability stayed at relatively high levels.

The years 2020-2021 can be read as the period of business foundation and digital preparation. The company had not yet formally issued its digital-intelligent transformation plan. Industrial software, intelligent manufacturing, and information services were still the main business bases, while the industrial internet platform and internal digital management system had begun to support later transformation. The composite score in 2021 was lower than in 2020, mainly because the customer and internal process dimensions weakened. The company's technical and customer base already mattered, but it had not yet become a stable advantage in the composite evaluation.

The period from 2022 to 2024 corresponds to planning and implementation. In 2022, the company released its transformation plan, clarifying transformation objectives, organizational arrangements, and business direction. During 2023-2024, it continued to promote industrial internet platforms, core industrial software product restructuring, independently controllable products, and AI applications. The composite score rose from 0.5107 in 2022 to 0.6043 in 2024. R&D input, the talent base, and digital-intelligent business performance provided stronger support after the plan was released. The 2024 peak was not caused by a single financial indicator. It came from the joint contribution of digital-intelligent capability, learning and growth, and part of the internal process dimension.

The year 2025 is more difficult to judge by the composite score alone. The score fell to 0.4302, and the decline was closely related to financial performance, customer structure, and asset turnover. According to the annual report, operating revenue in 2025 was RMB 10.972 billion, down 19.59% year on year. Net profit attributable to shareholders was RMB 1.305 billion, down 42.40%. Weighted average return on equity decreased from 20.67% in 2024 to 11.88%. At the same time, the sales share of the top five customers rose to 68.77%, showing a clear increase in customer concentration. Under the long-cycle adjustment of the steel industry and a slower investment pace among customers, the 2025 decline cannot be attributed only to weaker digital-intelligent capability. It reflects pressure from the external industry environment, customer structure changes, and project recognition timing.

The contrast between 2024 and 2025 is important. In 2024, the composite score reached 0.6043; one year later, it fell to 0.4302. This decline does not mean that all transformation-related capabilities weakened. Table 6 shows that learning and growth rose to 0.9246 in 2025, and digital-intelligent capability increased to 0.9152. What changed more sharply was the conversion side of transformation: profitability, customer stability, and asset turnover. This pattern is consistent with the characteristics of industrial software projects. R&D input and product development may continue even when customer-side investment and project acceptance slow down.

This contrast is easily missed if the composite score is read by itself. The lowest composite score appears in the same year when the two capability-oriented dimensions reach their highest levels. That is not a contradiction in calculation. It reflects a practical problem in industrial software: technical reserves, patents, R&D personnel, and AI scenarios can be accumulated

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inside the firm, but financial results still depend on customer budgets, project acceptance, and whether products can be replicated across more scenarios. The 2025 result should therefore be read as a conversion problem, not simply as a failure of capability building.

Table 5. Composite evaluation by stage

Stage	Period	Average composite score	Main features
Business foundation and digital preparation	2020-2021	0.4742	The formal digital-intelligent plan had not yet been proposed. Industrial software, intelligent manufacturing, and information services accumulated customer scenarios and technical foundations for later transformation, while composite performance fluctuated slightly.
Digital-intelligent planning and implementation	2022-2024	0.5429	After the release of the transformation plan, platform construction, product restructuring, independently controllable products, and artificial intelligence applications continued to advance, and the composite score generally increased.
Transformation test under industry downturn pressure	2025	0.4302	Steel industry adjustment, rising customer concentration, and project recognition timing affected the financial and customer dimensions, while digital-intelligent capability remained relatively high.

3.2.2. Dimensional Performance Analysis

Table 6. Dimensional evaluation scores of Baosight Software, 2020-2025

Year	Financial	Customer	Internal process	Learning and growth	Digital-intelligent capability
2020	0.3496	0.9666	0.9856	0.3170	0.0648
2021	0.4621	0.7245	0.7246	0.2215	0.2093
2022	0.5579	0.6366	0.7462	0.4244	0.2405
2023	0.7673	0.5321	0.3063	0.6390	0.2373
2024	0.6939	0.3657	0.5201	0.6815	0.6866
2025	0.0760	0.2034	0.0453	0.9246	0.9152

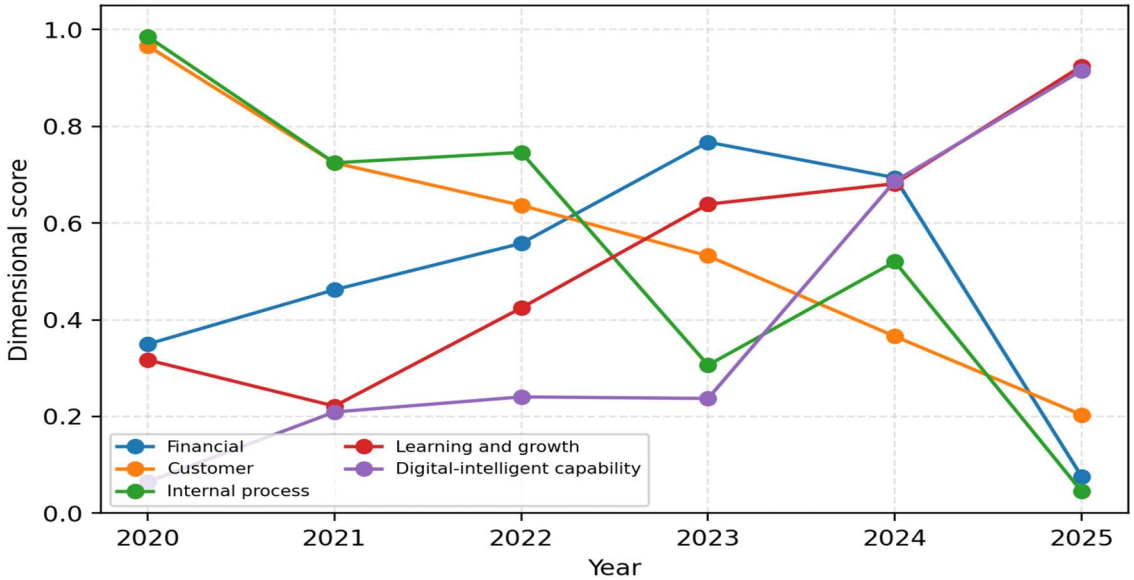

Figure 2. Trends of dimensional evaluation scores, 2020-2025

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In the financial dimension, Baosight Software's score improved from 2020 to 2023, reached the sample-period high in 2023, declined in 2024, and then fell sharply in 2025. During 2020-2023, the company continued to develop industrial software, intelligent manufacturing, and service outsourcing. Net profit margin, return on equity, and gross profit margin performed relatively well, supporting the financial score. In 2024, the financial dimension remained at a high level, although profitability had begun to weaken. In 2025, the score dropped to 0.0760. The main reason was that operating revenue, net profit margin, return on equity, and gross profit margin declined together. This is consistent with the annual report's discussion of lower industry returns, declining revenue from software development and engineering services, and margin pressure in some projects.

The customer dimension followed a different path. Its score declined from 0.9666 in 2020 to 0.2034 in 2025. The high score in 2020 was mainly related to better collection efficiency and a solid contract liability base. Later, accounts receivable turnover declined, indicating weaker collection from revenue. In 2025, the sales share of the top five customers increased to 68.77%, raising customer concentration risk. Large customers can provide stable orders and complex application scenarios, but excessive concentration can also transmit investment fluctuations in one industry or among several key customers into the company's performance. Research on supply-chain digital-intelligent construction also emphasizes customer collaboration and external risk transmission in evaluating transformation performance [4]. Baosight Software's weaker customer score in 2025 was therefore related not only to customer numbers, but also to the steel industry downturn, the pace of major customer projects, and changes in collection cycles.

The internal process dimension was high in 2020, stayed at a moderate level in 2021 and 2022, and then moved downward, reaching 0.0453 in 2025. The decline was mainly associated with lower total asset turnover and changes in expense ratios. In 2025, revenue fell while total assets continued to expand. Investment in the Baosight Cloud North China base and rising inventories reduced asset turnover. Although selling and administrative expenses decreased in absolute amount, the decline in revenue was larger, so the improvement in expense ratios was limited. During transformation and business-structure adjustment, project delivery efficiency, asset utilization, and period expense control remain important for internal process performance.

The learning and growth dimension was more stable. Its score generally improved and reached 0.9246 in 2025, making it one of the stronger dimensions in the sample period. Baosight Software is a technology-intensive enterprise, so R&D investment and technical personnel form the base for transformation. In 2025, R&D intensity was 12.98%, the number of R&D personnel was 2,017, and R&D personnel accounted for 33.28% of all employees. The proportion of employees with bachelor's degrees or above also remained at a relatively high level. These figures show that the company maintained R&D input and talent reserves even when financial performance was under pressure. The effect of these inputs is not immediate. It still needs to be released through product standardization, higher project implementation efficiency, and growth in continuing service revenue.

The digital-intelligent capability dimension rose from 0.0648 in 2020 to 0.6866 in 2024 and further to 0.9152 in 2025. Capability accumulation therefore continued even when the composite score declined. In 2025, the company described its business category as digital-intelligent products and services. It also promoted AI-integrated independently controllable industrial software, the Baoliandeng steel industry large model, AI application scenarios, industrial robots, and PLC products. The annual report disclosed that more than 100 AI application scenarios had been launched and that the Baoliandeng steel industry large model won the SAIL Award at the 2025 World Artificial Intelligence Conference. These details show continued investment in industrial intelligence. Still, the composite score suggests that the improvement in digital-intelligent capability was not fully converted into financial

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improvement in the same year. Commercialization of AI applications, project replication, and customers' willingness or ability to pay remain issues that require further verification.

The digital-intelligent capability score should also be read carefully. It is based on indicators such as software and technical service revenue, text disclosure intensity, and invention patent applications. These indicators can show direction and intensity, but they cannot fully measure commercialization quality. Stronger disclosure and more technological output, for example, do not necessarily mean that standardized products have already been widely replicated or that AI applications have formed stable revenue. The score is therefore more suitable as evidence of capability accumulation than as a direct substitute for cash flow or profit growth.

3.3. Overall Evaluation and Stage Characteristics

Baosight Software's performance from 2020 to 2025 is neither a story of continuous improvement nor a simple decline. The results show a gap between capability accumulation and operating outcomes. In 2020-2021, the company mainly built business foundations and prepared for digitalization. From 2022 to 2024, after the transformation plan was released and platform, product, and AI applications advanced, the composite score increased overall. The fall in 2025 reflected the pressure of industry downturn, higher customer concentration, and project timing on the financial, customer, and process indicators.

This pattern reflects the lag effect of digital-intelligent transformation in industrial software enterprises. Platforms, products, algorithms, talent, and industry scenarios are not converted into income immediately after investment. Their value is usually realized through customer demand, project implementation, product replication, and service continuity. Baosight Software's deep involvement in steel and process industries gives it valuable scenarios and customer resources. At the same time, when steel enterprises face profit pressure and become more cautious in capital expenditure, these advantages can also increase exposure to industry fluctuations.

The 2025 results also show that digital-intelligent capability cannot fully offset external shocks by itself. Artificial intelligence, industrial internet, and industrial software restructuring have opened new growth space for the company, but AI commercialization, charging models for industry large models, SaaS service promotion, and expansion into non-steel markets all need time to be tested. Existing studies discuss the long-term effects of digital-intelligent transformation on productivity, new quality productive forces, and supply-chain collaboration [1, 2, 4]. Technology input still has to pass through organizational absorption, scenario diffusion, and business model validation before it becomes stable performance. Baosight Software should not be judged only by the financial decline in 2025, nor only by the increase in technological disclosure. Capability accumulation, commercial conversion, and industry demand need to be considered together.

4. Case Implications

The case reminds industrial software enterprises not to evaluate transformation only through financial results. In Baosight Software, R&D input, talent structure, platform construction, and technological achievements all have a long-term character. They do not always appear immediately as revenue or profit growth. A purely financial evaluation may underestimate the company's accumulation in technical capability and product systems. Looking only at technology input or text disclosure would also miss market demand and commercialization uncertainty. A more appropriate evaluation should include financial, customer, process, talent, and digital-intelligent capability indicators. This logic is consistent with research showing that digital-intelligent transformation affects enterprise productivity, new quality productive forces, and operating efficiency in intelligent manufacturing.

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Customer and market structure are also important. Baosight Software has long served steel and large process-industry customers, which has brought industry experience and scenario resources. This advantage also carries risk when customer concentration is high. Once the steel industry enters an adjustment period, investment fluctuations among key customers can be transmitted more directly to corporate performance. The decline in the customer dimension in 2025 suggests that industrial software enterprises need to consolidate core industries while exploring non-steel sectors, overseas markets, and standardized product services. Such adjustment can reduce dependence on a single industry cycle.

R&D investment and AI applications still need to be converted into replicable products and services. Baosight Software has achieved results in industrial internet platforms, AI application scenarios, industrial robots, and PLC products. Yet the decline in financial performance shows that technological capability still needs time to become economic benefit. For industrial software enterprises, the next step should not be only to increase technology input. Product standardization, shorter project delivery cycles, clearer SaaS service models, and a more definite commercialization path for industry large models are also necessary.

External conditions should be included when transformation performance is interpreted. Digital-intelligent transformation is not a closed internal activity. It is affected by industry cycles, customers' investment capacity, policy orientation, and the commercialization progress of new technologies. Baosight Software's weaker performance in 2025 therefore does not necessarily mean that the transformation failed. In the context of steel industry adjustment and the still-developing commercialization of AI, a more reasonable explanation is that capability accumulation had not yet been fully converted into short-term financial results.

In general, Baosight Software's digital-intelligent transformation performance shows a structural pattern. The company accumulated business foundations and digital preparation conditions in 2020-2021. It formally proposed and advanced digital-intelligent transformation during 2022-2024, and the composite score improved overall. In 2025, the score declined, showing that the industry environment and customer structure can affect the conversion of digital-intelligent capability into financial performance. By using E-BSC and the CRITIC method to conduct a longitudinal evaluation of a single case, this paper presents the divergence between capability accumulation and financial outcomes. Because the sample period is limited and the study relies on publicly available data, the conclusions should still be examined through more industrial software cases in the future.

References

[1] Song, D. L., & Zeng, Z. Y. (2025). The impact and mechanism of digital-intelligent transformation on total factor productivity of manufacturing enterprises: Evidence from Chinese listed manufacturing firms. Science & Technology Progress and Policy, 42(7), 91–102. (In Chinese)

[2] Zhang, X. E., Wang, W., & Yu, Y. B. (2025). Research on the impact of digital-intelligent transformation on enterprise new quality productive forces. Studies in Science of Science, 43(5), 943–954. (In Chinese)

[3] Wen, S. B., Zhang, J. Q., & Jiao, R. (2022). Intelligent manufacturing, marketization, and enterprise operational efficiency: A textual analysis based on annual reports of A-share listed manufacturing companies. Accounting Research, (11), 102–117. (In Chinese)

[4] Xie, J. P., Zheng, Y. S., & Dong, Q. (2024). Supply-chain digital-intelligent construction empowering new quality productive forces in manufacturing enterprises: A quasi-natural experiment based on pilot cities for supply-chain innovation and application. Journal of Shanghai University of Finance and Economics, 26(5), 15–29. (In Chinese)