Legacy Applications Modernization and Approaching Technical Debt

Impact and Remediation Approach

Brian Wood
Research Director,
Global IT Services and Systems Integration Services

What are the three most important business priorities for your company/organization over the next 12–24 months?

38%
Increase productivity

31%
Improve operational efficiency

23%
Reduce costs

22%
Improve customer experience

22%
Drive innovation

21%
Expand into new markets/geographies

19%
Develop digital products and services

Source: IDC's *ServicesPath 2023,* March 2024

Most of the top business priorities for companies over the next 12–24 months are impacted negatively by accumulated technical debt. Determining how and when to reduce and/or eliminate the various categories of technical debt during the implementation, maintenance, or enhancement of enterprise applications is important and should not be overlooked.

Specifically, it is necessary to evaluate all accumulated customizations and extensions to existing enterprise applications and processes to determine which can be replaced with standard functionality in the new solution(s). If there is functionality that cannot be replaced with standard functionality, the next step is to determine its value and the effort and total cost of ownership for applying these customizations to the new solution(s). Care should be taken to leverage the extension frameworks provided by the application vendor to avoid adding new technical debt with nonstandard extensions and customizations.

Technical debt impacts many of the following top business priorities:

Productivity
Technical debt that causes enhancements and innovations to be instantiated in multiple systems slows productivity and increases the risk of errors. When resources must be allocated to maintain and remediate multiple systems, productivity necessarily suffers. Tooling debt also contributes to lower productivity. Adopting more modern, purpose-built tools and platforms helps remediate this.

Operational efficiency

Some types of technical debt impact overall operational efficiency negatively. Process debt tends to inhibit efforts to improve operational efficiency. Transformation efforts often include process optimization and automation to eliminate these inefficiencies.

Costs

All types of technical debt inhibit cost cutting. Design debt and testing debt add costs to development, maintenance, and enhancement efforts.

Customer experience

Improving customer experience often entails process and UX enhancement and personalization. Process and knowledge debt make it more difficult and expensive to implement these enhancements.

Innovation

In addition to the types of technical debt mentioned above, infrastructure and dependency debt inhibit innovation. If innovation is a priority, significant upgrades and refactoring projects should be considered.

Tips for Improving Performance

Prioritizing business goals and analyzing technical debt are necessary for improving performance. It is possible to create a backlog of technical debt "stories" or potentially an "epic" that will include stories for multiple squads.

Use the following criteria for this exercise, keeping in mind that some technical debt types will present more significant and immediate requirements than others.

1. Determine organizational goals and priorities.
   - List and prioritize all key performance indicators (KPIs) with planned and actual data.

   - Set constraints for each KPI.

   - Adjust priorities based on current attainment of goals (e.g., 100% of plan priority stays the same, 50% of plan will double the priority).

2. Take an inventory of the customizations and extensions to the existing enterprise applications to determine what can be eliminated and what will need to be reimplemented and why.

3. Classify technical debt based on importance, urgency, and business case.

Message from the Sponsor

DXC TECHNOLOGY

While tech debt accumulation is continuous and inevitable, you can minimize the amount of debt that you accumulate, create strategies to address your current tech debt, and build an organizational process that limits the amount of future tech debt you create.

Reframe your technical debt

---

idc.com

in @idc

X @idc