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## **Companion Guide To Software AG's *SOA Value Assessment***

*Using SOA And BPM To Drive Business Optimization*

Project Director: Jeffrey North, Senior Consultant

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### **Headquarters**

Forrester Research, Inc., 400 Technology Square, Cambridge, MA 02139 USA  
Tel: +1 617/613-6000 • Fax: +1 617/613-5000 • [www.forrester.com](http://www.forrester.com)

# Table Of Contents

Executive Summary .....	3
Challenges Of Specifying The Benefits And ROI Of SOA.....	4
Forrester's Methodology: Making SOA Value Discovery Manageable .....	6
Using The SOA Value Assessment.....	8
Benefits Of Using The SOA Value Assessment.....	12
Appendix A: Descriptions Of The Four Areas Of SOA Business Value.....	13
About The Project Director .....	15
About Forrester.....	16

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## Executive Summary

Service-oriented architecture, or SOA, is about creating business agility and efficiency by reorienting IT to produce a unified, consolidated, flexible, and reusable set of business services that embody a firm's business capabilities in the digital world.

Software AG commissioned Forrester Consulting to create a model to help business and IT decision-makers understand, in a comprehensive, holistic way, the value of SOA in their own organizations.

Software AG chose Forrester Consulting, part of leading IT analyst firm Forrester Research, because of Forrester's Total Economic Impact™ (TEI) valuation methodology, Forrester's rich experience studying SOA projects, and for the firm's expertise in monitoring and reporting on SOA trends.

The result is the SOA Value Assessment model, developed with and exclusively for Software AG. The model is a unique tool designed to specify and articulate the business value opportunities of SOA and BPM and the critical issues and questions that IT and business units will need to address — in terms that both IT and business can understand. The model guides you through a series of sequential questionnaires soliciting input specific to your business and IT environment. The information and results in the SOA Value Assessment model are intended to guide you toward the areas of potential value for your organization. The model also helps to elevate your understanding above simple SOA concepts or product features and functionality; it offers substantial thought leadership around SOA business value to specific processes, projects, or business domains in your company. The SOA Value Assessment is applicable across all industries, company sizes, and types of organizations.

Benefits of the SOA Value Assessment include:

- An objective SOA assessment model, created by a third party, that does not reference Software AG products
- A model created from a proven methodology supported by Forrester analysts.
- A strategic assessment that gives prospects assistance in justifying technology expenditures with more accuracy.
- A unique business case based on the prospect's own input, numbers, and expected impact.
- A detailed report based on business value.

Forrester designed the SOA Value Assessment to help decision-makers — from architects and business analysts to CIOs, IT, and business managers — to address the broad spectrum of SOA issues.

Based on Forrester's proven methodology for determining the value of IT, the Assessment will help you to communicate a comprehensive view of the value of SOA and specifics on where SOA can have the greatest impact. It offers a quick start for your business case and a detailed report on how SOA can help your company capitalize on new business opportunities.

# Challenges Of Specifying The Benefits And ROI Of SOA

Why is it hard to calculate the return on investment (ROI) of SOA? In short, there are too many elements — which vary from one organization to the next (even in the same industry) — to be able to provide a simple set of one-size-fits-all-organizations formulas.

Another challenge in SOA value determination is the intent or direction from which the organization approaches SOA. Is the primary driver a need for more business agility? Is it legacy modernization? Is the original motivation one of simple code reuse? Or is it all of the above and others, too?

Asking, “What’s the ROI of [enter your technology solution here]?” is a commonly expressed question and one that is valid for applications or technologies that are focused on a defined solution. But SOA is bigger. Typically, IT initiatives match business needs with a technology investment. Yet SOA is applicable to many business needs. It can make an impact in an endless variety of ways, like opening major new markets, creating greater customer loyalty, and reducing application maintenance costs. Many organizations will achieve these benefits and many more. Thus we should view with skepticism any attempt to assign an overall ROI of SOA. To further complicate matters, if you want to truly measure the value of SOA, you must know the situation at an individual organization. The actual value provided by SOA is highly dependent on the particulars at an individual company, such as "How many times will a given service be reused?" or "What is the value of getting a solution to market X days sooner?"

So creating a relatively simple ROI calculator cannot work; SOA is sufficiently complex to require that the ROI must be calculated uniquely for any one organization, and it must address the financial implications of :

- The number of siloed applications affected.
- The number of business process (and nested sub-processes).
- How much business logic needs to be separated from computer logic.
- The amount of value currently contained in packaged applications.
- The number of adapters and “black box” components needed; the amount of effort required to carve out and build in reuseability for each.
- The scope of business applications that can be integrated.
- The number of duplicate software processes that can be rationalized.
- The number of data definitions that need to be harmonized.
- The value in regulatory compliance and better audit procedures.
- The value of increased agility or responsiveness to change; the value in being able to change business processes (and the related software processes) to meet strategic opportunities.
- The extent to which future changes become easier (and less costly).

- Changes in training requirements.
- The time horizon for SOA development.

Assessing SOA value within the context of a single project doesn't work very well, either. Value accrues over time as companies start small and increase in scope to include more services. Organizations develop a better understanding of the synthesis between SOA, their business strategies, and their future application investments. Focusing on a single project will undervalue SOA.

# Forrester's Methodology: Making SOA Value Discovery Manageable

Breaking down the questions around SOA's value into manageable pieces is critical for gaining a holistic assessment of SOA's value for each organization. Like SOA itself, where one key objective is to break monolithic structures into manageable services, identifying the areas of value requires a synonymous set of exercises.

Forrester expects that the SOA Value Assessment tool will be used repeatedly by a single organization as business and IT decision-makers focus on individual projects, business domains, or sets of related processes. Estimates of financial value become easier when SOA initiatives are separated into manageable pieces (projects), with an overall financial value calculable with aggregation of the projects (with the caveat, as stated above, that SOA value increases over time).

By responding to a series of questions, providing input specific to the prospect's business, the SOA Value Assessment assists decision-makers in understanding the business value opportunities of SOA and the critical issues and questions that IT and business units will need to address. This process also yields a rigorous, tailored analysis and illustrates to the prospect what the potential business process and financial impact areas of SOA are and how benefits can be calculated using your own data.

Forrester's method for helping organizations achieve this is to break down the pieces into three levels of granularity:

- Business issues + governance = opportunity mapping.
- Detailed analysis.
- Business value elements.

These pieces of the SOA Value Assessment are described below.

## The Importance Of SOA Governance

To get SOA right, governance is critical.

SOA governance elaborates on the processes, policies, organizational structures, and communication channels of IT governance, transforming and extending them to meet the new demands and governance objectives of SOA. Poor SOA governance limits the potential for value from SOA. Although organizations can achieve some value from SOA without strong governance, pursuit of the highest strategic value from SOA drives organizations, through governance, to better align business and IT and to better align the efforts of teams within IT.

Forrester therefore built the SOA Value Assessment to incorporate extensive governance concepts and created a framework to allow the output of this tool to assess the impact of the organization's governance maturity on the likely benefits achievable from SOA. A second rationale is to highlight important areas for SOA governance improvement.

Forrester organizes SOA governance into four major domains of IT governance:

- Service portfolio governance.

- IT infrastructure governance.
- Project-level SOA governance.
- Governance of service operations.

Strong governance in all of these areas is not necessary to *start* with SOA, but it is necessary for a *fully mature* SOA.

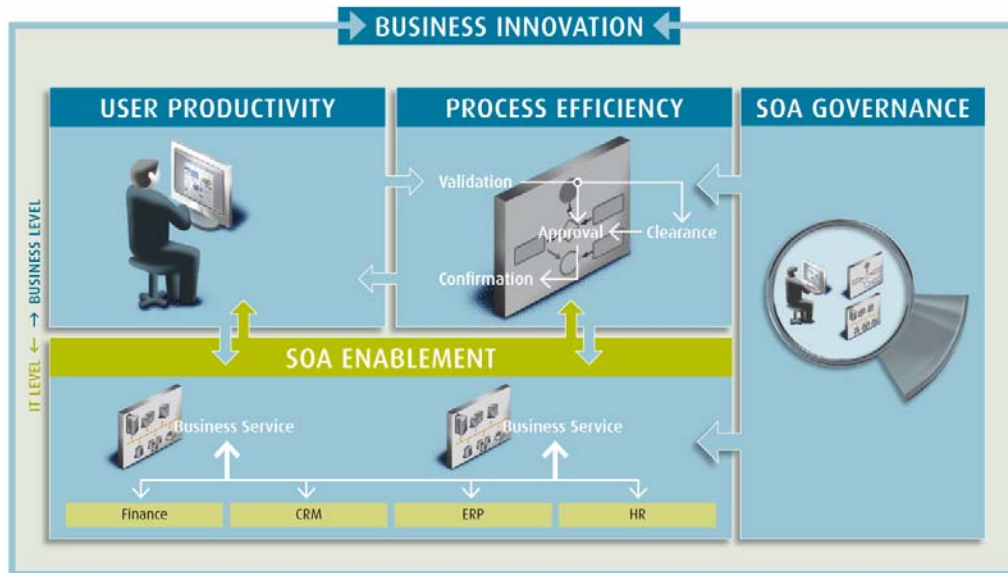
The objective of the SOA Governance section in the Assessment (which is optional) is to: 1) assess the impact of an organization's governance maturity on the likely benefits achievable from SOA, and 2) highlight important areas in which your organization may need specific plans for SOA governance improvement.

The Assessment asks you to estimate the maturity of your governance practices by the time your organization will be implementing SOA by rating a series of statements on a scale from 0 to 5. These responses are fed into a scoring system that the Assessment uses to provide “governance-adjusted” values in other sections of the model.

## Using The SOA Value Assessment

Forrester has organized the critical elements of each of the key areas of IT and business value, which we have termed User Productivity, Process Efficiency, SOA Infrastructure Enablement, and Business Innovation to enable you to explore specific aspects of SOA (and BPM) while gaining a holistic understanding of your own SOA implications in the same exercise.

The graphic shown here, which you will see upon entry to the Assessment, depicts the four areas.



Source: Software AG

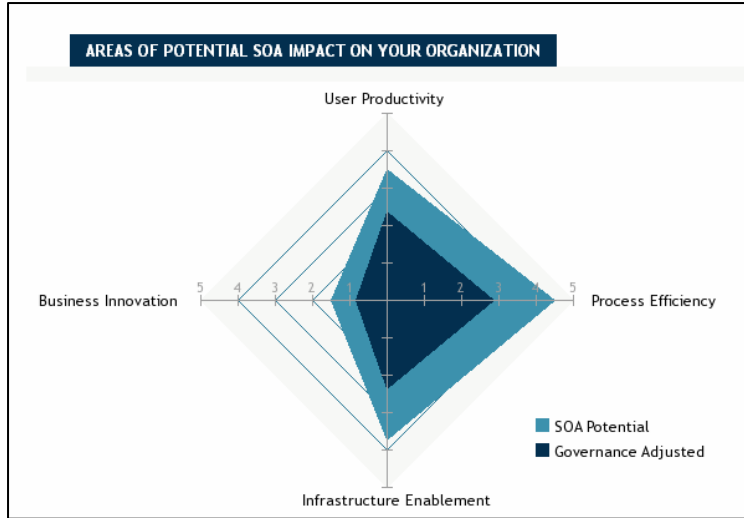
### Mental Checklist For Starting The SOA Value Assessment

Begin to consider the topics the Assessment will address:

- Use of core applications; overlap and complexity of applications; training requirements.
- Changing process cycle times, process flows, business logic.
- Rationalizing duplicate applications, opening legacy applications for reuse, faster project development as services become available.
- Integration with customers and suppliers; new product/service offerings from SOA-based solutions.
- IT/business communication on major business strategies; documenting plans for needed business solutions, project portfolio management; avoiding duplicate functionality; cost-sharing across multiple projects.
- Policies for architects and developers to collaborate on IT standards, architecture designs, and platform choices; guidelines on how to use software infrastructure; reference models to guide architecture used by software projects.
- IT and business unit collaboration on the design and fit of the solution; functional design reviews of a solution's business functionality by delivery project team and business domain experts; compliance of both platform/product and functional design.
- Formal processes for specifying, approving, and controlling policy specifications that control the functionality, execution, and reporting of services.

## Business Issues + Governance = Opportunity Mapping

The first level of the Assessment asks you to answer a series of 16 general questions (on a 0 to 5 scale) in four areas: User Productivity, Process Efficiency, SOA Infrastructure Enablement, and Business Innovation. Next, you can respond to 20 questions about your organization's governance practices (although these questions are optional). Based on the information provided in these first sections, the Assessment generates a high-level map of the SOA opportunities for your organization; the potential impact of SOA in the four areas is summarized in a spider diagram. This diagram is intended to provide you with a perspective on the areas that have potential for generating the most value from SOA-based solutions, as well as a view of the impact that your organization's governance practices have on that potential value. The information is summarized in a spider diagram like the one shown to the right.



The diagram shows two sets of values. The dark-blue area indicates the SOA potential with current governance structures and processes. The light-blue area shows even greater improvements that would be possible with robust, comprehensive SOA governance.

## Detailed Analysis

Next the SOA Value Assessment asks, "Which of the following areas would you like to explore further?" You now have the opportunity to evaluate in greater depth one or all of the four areas:

- User Productivity
- Process Efficiency
- SOA Infrastructure Enablement
- Business Innovation

Each area offers explanation and instructions, and the option to include that area or not, as in the example shown here.

You will then be asked to respond to a series of questions (again, on a 0 to 5 scale) in several subcategories. With User Productivity as the example here, there are

**USER PRODUCTIVITY**

Would you like to include SOA User Productivity in this evaluation?  
 Yes  No

For the next set of questions, please consider the types of tools that users currently apply to their work and the additional tools that could be applied to make that work better. For example:

- Existing applications (interfaces and systems)
- Communication and collaboration tools (email and instant messenger)
- Reference materials (product, process or service catalogs)
- Information access (search tools and the Internet)

**REDUCED APPLICATION INTERFACES**

Users need to navigate between core application screens extensively and this could be streamlined if the number of screens were reduced or consolidated. 0 1 2 3 4 5

To work on a core business task users require information from several different types of systems beyond core process applications, such as communication tools and reference materials. 0 1 2 3 4 5

The time required to complete a given task or business objective could be reduced if users were provisioned with "THE tool" for their job. 0 1 2 3 4 5

The number of application screens that a user has to access is a regular source of frustration for users and their managers. 0 1 2 3 4 5

**REDUCED TRAINING EFFORT**

Training, especially for new users, could be reduced if the core process applications were eliminated, streamlined or consolidated. 0 1 2 3 4 5

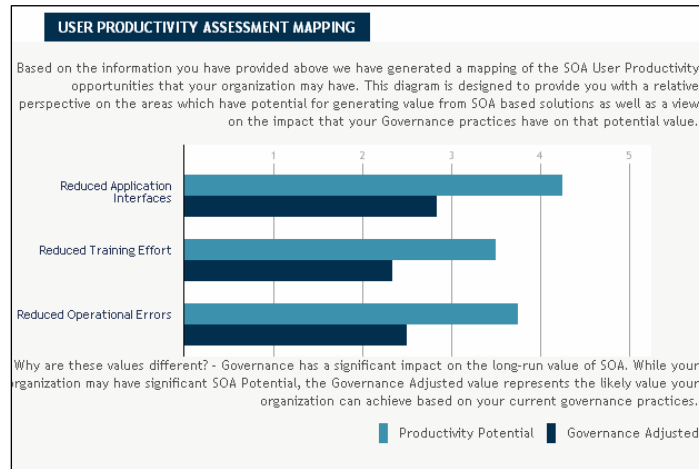
Training on the core process applications is only one part of the course. Users also need to be trained on where and how to find reference material. 0 1 2 3 4 5

12 questions organized around the three subcategories:

- Reduced Application Interfaces
- Reduced Training Effort
- Reduced Operational Errors

The output of the Assessment is summarized on a bar chart like the one shown here. Here again, there are two “scores” for each subcategory — for potential value and governance-adjusted potential value.

The other three areas — Process Efficiency, SOA Infrastructure Enablement, and Business Innovation — function in the same way as the User Productivity section described above. See Appendix A for more explanation of each of these areas of SOA business potential.



## Business Value Arguments: Building Blocks for Calculating ROI

The third level of analysis asks respondents to engage a number of financial scenarios that map to the Detailed Analysis questions that users of the tool will have just completed. Several financial scenarios are presented, with working calculations, to illustrate the actual financial benefit users might expect from their own SOA-based solutions.

To research and document an organization’s potential for business value from a SOA-based solution aimed at User Productivity, for example, the Assessment has identified scenarios where, to accomplish one business task, users must deal with a complex set of poorly integrated user interfaces or where there are significant user or management frustrations.

Answer Field Key

- Answer field. (Default values provided as guides)
- Editable field. (Value is a Forrester Default or reference to a previous answer)

**REDUCED APPLICATION INTERFACES**

**User Group**

What is the function of this Group? **Example: Order Processing**

How many users are in this group (as a % of total users)? **2.5%**

Users impacted based on the total number of business employees provided. **50 Users**

**Application Portfolio**

How many applications do these users currently (or need to) access? **4 Applications**

How many of these separate applications will these users access under SOA? **1 Applications**

Reduction in Application Interfaces **75%**

**Operations / Transactions**

How many transactions does each user typically perform per month? **150 Transactions/Month**

How many minutes does it typically take these users to complete each transaction? **35 Minutes**

Utilization per user **66%**

**Application Interface Impact**

How much of the overall activity is impacted by the tools the user has at hand? **60%**

Please consider not only the impact of not having to switch between applications, but also the impact of access to tools and materials beyond the core process applications

**Potential Business Value Arguments**

Reduction in Transaction Time (in minutes) **14 Minutes/Transaction**

Increased Transactions Per User (in transactions) **90 Transactions/Month**

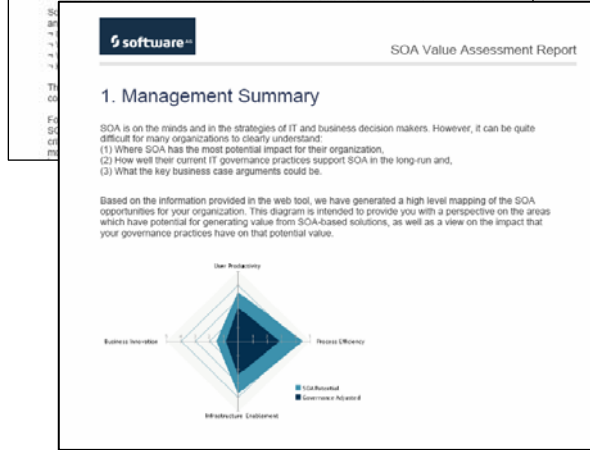
Total Increased Transactions (in transactions) **4,500 Transactions/Month**

Each scenario asks questions, collects data, and performs calculations like those shown at here. If you have rated a particular section as having a low applicability or impact, however, the corresponding scenario questions will appear in *gray* shading, indicating low priority.

# SOA Value Assessment Report

The final deliverable is a 13- to 20-page report that includes all of the questions and your responses, along with the custom-created diagrams and the calculations or business case elements that you completed. The report's table of contents is shown below:

1. Management Summary
2. SOA and BPM in your Organization
3. SOA Governance
4. User Productivity
5. Process Efficiency
6. SOA Infrastructure Enablement
7. Business Innovation



## Benefits Of Using The SOA Value Assessment

The SOA Value Assessment is a unique tool in the market that Forrester has created exclusively for Software AG.

Forrester has attempted to create a tool that will assist you in moving beyond the hyperbole and generalizations that accompany SOA concepts to gain an understanding of the specific areas in your organization where SOA is likely to have the greatest benefits. And by adjusting the potential values for current governance practices, the Assessment becomes even stronger.

The SOA Value Assessment has been instrumental in framing the critical SOA planning and development dialog between IT and business decision-makers. By encouraging you and your colleagues to work through the questions and calculations, you can focus on areas of highest concern, greatest value, or both. Forrester believes that building a successful SOA is a joint venture between business and IT. The SOA Value Assessment is a tool for navigating to the value and describing it in terms that both IT and business understand.

SOA is on the minds, and in the strategies, of IT and business decision-makers. Yet it can be quite difficult for many organizations to clearly understand:

- Where SOA has the most potential impact for their organization.
- How well their current IT governance practices support SOA.
- The key business case arguments.

Forrester and Software AG SOA Value Assessment will help you to assist decision-makers — from architects and business analysts to CIOs, IT, and business managers — in addressing these issues.

# Appendix A: Descriptions Of The Four Areas Of SOA Business Value

This appendix provides the text that is included in the SOA Value Assessment describing each of the four categories of SOA business value:

- User Productivity
- Process Efficiency
- SOA Infrastructure Enablement
- Business Innovation

## User Productivity

Users need support from IT to increase their productivity. Having the right information at the right time in the right form helps users to move quickly and effectively, solve a customer request, learn new processes, or simply perform existing tasks with a minimum of effort or potential for error.

SOA can significantly increase user productivity by changing the approach of, "The right tools for the job," to "THE tool for the job."

In a "tools" approach, IT presents independent applications to the user, and the user must know which ones to use when. The process remains in users' heads and is thus subject to the errors and omissions that users will commonly make in transferring data and transaction results between applications.

With a "THE tool" approach, custom interfaces are built for dedicated user roles such that the tool is designed to optimize the end user's business process by integrating all of the data, content, transactions, collaboration, and communication tools needed into one integrated, context-aware user interface. By freeing you to implement user interfaces that best match your business process and achieve the highest user productivity, SOA also frees you to use the best tools and delivery channels for user interfaces, whether Web 2.0, desktop application, rich Internet applications, mobile devices, interactive voice response, or any other channel.

## Process Efficiency

The time and quality with which customer requests are answered are key to the success of an organization. At the same time, the underlying processes need to be permanently adjusted to meet new market requirements. This can be achieved by modeling, executing, and optimizing processes based on BPM technology.

The transparency and automation from BPM enables:

- Fewer errors between cross-department processes.
- Greater integration and efficiency.
- Increased business and SLA control.
- Deeper overall customer satisfaction.

Customers become more loyal when you increase their efficiency and effectiveness. As you intertwine their processes with yours, you also increase the barriers for them to go elsewhere. When you increase your suppliers' efficiency, you can press them for lower prices and consequently offer better prices to your customers.

### **SOA Infrastructure Enablement**

An agile IT infrastructure is crucial to achieving higher user productivity and process efficiency and to adjust business processes to ever-changing market demands. SOA gives you the standards-based and flexible infrastructure to achieve this.

### **Business Innovation**

When data, transactions, and status updates flow more easily to and from customers and suppliers, new business opportunities become possible. Through flexible outsourcing, your process can incorporate value-added features provided by outsourced suppliers. You might expand your value proposition by removing steps from your customers' side of the process, integrating some of their suppliers into your side of the process and increasing your revenue opportunities. You may have assets that you can sell digitally. And whether or not you can do any of these, you can increase the speed and effectiveness of integrating business process and applications in merger and acquisition (M&A) scenarios. SOA helps with M&A because SOA-based business services can provide access to needed business capabilities and data while hiding the complexity of an acquired/merged firm's applications and processes. The integration teams from both organizations focus on the business interface between the two, while technical complexity is contained within each organization. In this way, whole new business processes can be efficiently constructed across multiple organizations.

New market assessment is by nature expansive and forward-looking. Forrester has included this framework to illustrate the kinds of benefits that SOA-based solutions can bring to areas of business development and expansion.

## About The Project Director

### **Jeffrey North, Senior Consultant**

Jeffrey North is a senior consultant with Forrester's Total Economic Impact (TEI) consulting practice. The TEI methodology focuses on measuring and communicating the value of IT and business decisions and solutions as well as providing an ROI business case based on the costs, benefits, flexibility, and risk of investments.

Jeff came to Forrester with consulting and operating experience, notably working with fast-growth companies. He was a founding member of the digital strategy practice at Cambridge Technology Partners, where he specialized in business value justification of technology investments and customer advocacy. As a director in the international and catalog business units at Staples, Jeff built and managed metrics and reporting programs in North America and Europe as the company experienced significant growth. He has also consulted in a business-IT capacity to retailers and life sciences companies.

Jeff holds a B.A. from St. Lawrence University and an M.B.A. with a concentration in international management and finance from the Thunderbird School of Global Management.

## About Forrester

Forrester Research, Inc. (Nasdaq: FORR) is an independent technology and market research company that provides pragmatic and forward-thinking advice to global leaders in business and technology. For more than 23 years, Forrester has been making leaders successful every day through its proprietary research, consulting, events, and peer-to-peer executive programs.

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