What are the best practices for customization?

What criteria should I use to determine whether to customize?
Excess customization can build up technical debt and lengthen your upgrade cycle, inhibiting your ability to take advantage of new features. **Evaluate demands** for customization very carefully and only resort to customization where there is clear business value and no alternative to satisfying demand. Your demand board can use a simple, three-step scoring framework to help your evaluation:

**Step 1: Identify a “value score” for the proposed customization.**
Use a simple scoring framework to assess the business value associated with the request. Your demand board should review and approve this scoring framework. You can use the example below to get started.

<table>
<thead>
<tr>
<th>Value score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – Mandatory</td>
<td>Customization is required for regulatory and compliance purposes.</td>
</tr>
<tr>
<td>4 – Critical</td>
<td>Customization is a &quot;must have&quot; to realize a business value objective and/or adoption requirements.</td>
</tr>
<tr>
<td>3 – Medium</td>
<td>Customization supports realization of a business value objective and/or adoption, but workarounds are available.</td>
</tr>
<tr>
<td>2 – Low</td>
<td>Customization supports service experience for service consumers, process users, and/or developers but does not necessarily promote a business value objective or adoption.</td>
</tr>
<tr>
<td>1 – No value</td>
<td>Customization does not support improved service experience, value realization, or adoption.</td>
</tr>
</tbody>
</table>

**Step 2: Identify a “complexity score” for the proposed customization.** Evaluate the type of customization proposed based on the potential risk it could have on performance and/or your time to upgrade. You can use the example below to get started.

<table>
<thead>
<tr>
<th>Customization type</th>
<th>Complexity score</th>
<th>What business value do we need to see?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extend an existing table in scope with some scripting</td>
<td>Low to medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Build a new scoped application</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Build a new global application</td>
<td>Medium to high</td>
<td>Critical</td>
</tr>
<tr>
<td>Change baseline business rules</td>
<td>High</td>
<td>Critical or mandatory</td>
</tr>
<tr>
<td>Build complex, custom integration</td>
<td>High</td>
<td>Critical or mandatory</td>
</tr>
</tbody>
</table>

**Step 3: Evaluate the return for the proposed customization.**
After you’ve identified your complexity score, you can determine whether the business value of the proposed customization is sufficient to warrant implementation.

*Note: Tables are derived from our Success Playbook on avoiding customization pitfalls.*
What technical best practices should I follow for customization?

1. **Avoid copying objects.** Instead, update objects in place wherever possible, except for Service Portal widgets and other items designed to be reused.

2. Default to “add before edit.” This means that you should, for example, add fields to forms rather than change the type of an existing field. When adding, avoid using the same names as out-of-the-box objects, methods, or classes. Keep the number of fields you add to a minimum – the more fields you have on a form, the longer it may take to load.

3. **Use the ServiceNow® no- and low-code capabilities** wherever possible, including use of UI policies (before writing client scripts), Flow Designer (over business rule scripts), IntegrationHub (before writing custom integrations), and other capabilities.

4. Use **scoped applications** as your default for any new custom development.

5. **Document all customizations.** Add comments to explain why you customized (including business justification), and ensure you review all comments prior to upgrading, to determine if you can revert to out-of-box.

6. **Create tests for all customizations.** You should ensure that you write Automated Test Framework (ATF) tests for all customizations where possible.

7. **Use HealthScan** regularly to identify unnecessary customizations.

**What best practices should I follow for custom integration requirements?**

For more details on integrations review our checklist on: [Implement integrations with ServiceNow](https://www.servicenow.com)

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**Check to see if your required integration is available with an out-of-the-box (OOTB) plug-in.** Consult your account team or ServiceNow Product Documentation for [guidance on supported integration interfaces](https://docs.servicenow.com).

**Check to see if an integration is available via the IntegrationHub.**

**Check to see if a ServiceNow integration is available on the ServiceNow Store.** If not, check to see if a certified integration is available via Store.

**Check to see if an integration is available from Share (on the Developer Portal).** Build your own only if no other options are available.
What are the best practices for customization? (Continued)

How do I deal with customizations when I upgrade?

ServiceNow upgrades will not overwrite customizations you have made but will mark them as skipped records in the ServiceNow Upgrade Monitor. To make sure they’re successfully ported to the upgraded instance, you must manually process the skipped changes.

Assuming you’ve documented all your customizations—including business justification—take your documented inventory and compare it with the skipped records identified in the Upgrade Monitor. After filtering out low-risk changes that have resulted in skipped records (e.g., field labels or form layouts), you’ll need to decide whether to:

- **Retain** each customization
- **Revert** to out-of-the-box
- **Merge** your customization with the base system to resolve conflict

For a detailed overview of this process, see our Success Quick Answer, “What’s the process to review and address skipped changes?”

Related resources

- Customization best practices for ServiceNow
- Upgrade quickly and maintain platform health
- Success Quick Answer – How should citizen developers enhance their learning?
- No-Code Guide for the Now Platform®