

Top 10 Best Practices Guide

For Building/Maintaining Accessible Dynamic Forms

It's estimated that 22 percent of adult Americans have at least one disability. From mobility issues to visual impairments, disabilities can create significant challenges in accessing the internet and therefore your Dynamic Forms.

According to SiteImprove (<https://siteimprove.com/en-us/blog/common-accessibility-issues/>) here are the most commonly found issues.

- 1. Missing or inaccurate text alternatives for images*
- 2. Insufficient color contrast*
- 3. Inaccurate HTML heading structure*
- 4. Missing WAI-ARIA attributes*
- 5. Links without text alternatives*
- 6. Non-accessible forms*
- 7. Overlays*
- 8. Buttons without alt text*
- 9. Uneven spacing in text*
- 10. Image carousels or sliders*

The great news is that several independent organizations and tools like the Web Content Accessibility Guidelines (WCAG) from the Web Accessibility Initiative offer several actionable steps for improving website accessibility. Next Gen uses these guidelines to help us in building a better product.

The Next Gen / Dynamic Forms team have continually updated the Dynamic Forms product to allow users to build and maintain fully ADA/WCAG accessible forms and to ensure all form users can use and submit forms. Dynamic Forms is also evaluated by a third-party audit service (Equal Entry - <https://equalentry.com/>) each year to ensure we are keeping up with compliance and any other changes in the accessibility world.

There are, however, ways for our clients to break accessibility. That is why we put together this Top 10 Best Practices Guide to help ensure finished forms remain accessible for your user community.

1. Make Forms Logical and Easy to Use

Nothing about technology here – this just requires a bit of thinking before starting to build the form.

Accessible forms are easy to understand, complete, and submit. Instructions, cues, required form fields, and field formatting requirements must be clearly identified to users. Error recovery must be intuitive and descriptive.



Best Practice #1: Before building the form, consider how to make the form easier to use and be sure to consider grouping like parts of the forms together.

Where possible, divide long forms into multiple pages forms that constitute a series of logical steps or stages. This helps make long forms less daunting and easier to understand, particularly for people who are less experienced using computers or who have various cognitive disabilities.

The following basic principles should apply for multi-step forms:

- Repeat overall instructions on every page.
- Split the form up according to its logical groups of controls. For example, in an online shop, shipping and payment information are typically separated.
- Make it easy to recognize and to skip optional stages. For example, highlight optional steps in the main heading of the web page and provide an option to skip.

2. Use multiple text colors and color contrasts wisely.

Many internet users with disabilities are unable to distinguish between text contrasts or different colors.



Best Practice #2: Avoid using color alone to convey meaning. Use icons, written content, and other visual elements to reinforce clear communication of the content.

For example, some people may not be able distinguish between the background color and the text color in the statement below.

Normal Text

WCAG AA: **Pass**
WCAG AAA: **Fail**

The five boxing wizards jump quickly.

You can see that it passes for WCAG Level AA, but fails at the strictest level of compliance of WCAG Level AAA. Your institution may have levels of achievement that must be achieved for your forms.

Likewise, if you build a form and want to stress your point using your favorite hex colors, you might get a sentence that looks like this:

The quick brown fox jumped over the **awesome** form builder!

As you see below, even the contrast in color may not be enough to show all of your users that you had a different meaning for the colorized text.

Normal Text

WCAG AA: **Pass**
WCAG AAA: **Fail**

The five boxing wizards jump quickly.

For more information see: <https://webaim.org/articles/contrast/>

To check for contrasts: <https://webaim.org/resources/contrastchecker/>

3. Treat your form images properly

Images on a website play a major role in conveying information, but that's an obvious issue for customers who are blind. There are three types of images:

1. Images that are purely decorative – not needed as information to complete the form (maybe a large line, a star or some other decorative image).
2. Images that represent simple information – (maybe the school logo, image of mascot or similar photograph or image)
3. Images that mean to convey complex information (graph or charts)

Change / Declare Major Form

Name / Type	Add Item	Add Item Template	Edit Item	Styles
Admin Notification				
Payments				
Reservation Events				
Custom Text				
Participants				
Workflow				
SSO				
Events				
Advanced				

Name	Width	Height	Decorative?	ALT Text
Image1	400	50	☐	Le Moyne Logo

Decorative images will be ignored by assistive technologies, such as screen readers.

Initials: Signature4

Table1



Best Practice #3: If the image is purely decorative and you do not need to convey a message to the form user, click the Decorative check box and the image will be ignored by the accessibility tools. Otherwise, use the ALT text box to convey the message/describe the image. If the image is a chart or a graph, consider building it with a Dynamic Forms table.

For example, if you have a part of the form where you are displaying an icon or a logo (see the big E below) – you can click the Decorative checkbox, which will ensure that the accessibility tools do not try to announce the big E to the user, which might be confusing. If you do want to convey a message about that icon, uncheck the Decorative check and add text to the ALT Text box.

The screenshot shows the 'Edit Item' tab in the NextGen Web Solutions form builder. The configuration for an image item is as follows:

Property	Value
Name	Image1
Width	400
Height	50
Alignment	Left
Decorative?	☒
ALT Text	
Url	/images/Logos/BigE_1.png

Below the configuration panel, a preview of the form is shown. It contains a table with two columns. The first column contains a large green 'E' logo. The second column contains the text: 'This is text which you are describing something important to the user.'

4. Be sure you are adding labels to form fields

Adding a label to a field sounds easy, especially if it is a standalone question. But if you have a label on top of the input field, or on the right side or if it's in a table or grid, many screen readers or other accessibility tools cannot instruct a user on what is required that is why all fields should have a label.

Successful form designers will present instructions or labels that identify the fields in a form so that users know what input data is expected. Instructions or labels may also specify data formats for fields especially if they are out of the customary formats or if there are specific rules for correct input.

Remember that too much information or instruction can be just as harmful as too little. The goal is to make certain that enough information is provided for the user to accomplish the task without undue confusion or navigation.

To add labels to input fields not in a table, simply type in a meaningful label below the name of the field.

Note: If you put your cursor in the top field, then click the bottom field, the field name will replicate in the bottom text area, possibly saving you a few keystrokes.

Dynamic Forms editor interface showing the 'Edit Item' tab. The 'Name' field is set to 'StudentFirstName' and the 'Label' field is set to 'Student First Name'. A red arrow points to the 'Label' field.

To add labels to input fields in a table or other fields where the labels is presented in a different field, use the “hide label” option and tell Dynamic Forms where the label is contained. For example, this form contains eight columns, four text descriptions and four input values.

For the field in the fourth column, input field name – FirstName – we are going to hide the label then click the Accessibility Label dropdown to tell Dynamic Forms that the label is the text field LabelFirst or First Name shown in Column 3.

Dynamic Forms editor interface showing the 'Edit Item' tab. The 'Name' field is set to 'FirstName' and the 'Label' field is set to 'First Name'. The 'Hide label?' checkbox is checked. The 'Accessibility Label' dropdown menu is open, showing options like 'EmailAddressLabel', 'IDLabel', 'LabelFirst', 'LabelLast_1', 'LabelLine', 'LabelLine1', and 'LabelLine3'. A red arrow points to 'LabelFirst'.

This allows the accessibility tools to read the labels appropriately.



Best Practice #4: Always add labels to your fields to assist the user in completing the form.

One last example for labels. We will use this form text and inputs below:

You must verify some information.

Select the choice that applies to you.

* -- Please Select -- ▾

Here, the choice list needs a label to explain more clearly what is being required. Either the label is the text above the choice list selection, or the Form Designer should add a label to the right of the choice list field.

5. Consider adding custom error messages to complex inputs

Some inputs are a bit more complex than others. An input like “Current City” is easy to understand and enter. However, even something like “Enter your weekly pay amount” can get a little tricky for some users. Especially if the form is asking for the input value to be something that the user does not expect.

Dynamic Form already produces a decent good error message to alert the users of an error on inputs. See one below. However if you wanted to more clearly express what input you are expecting, Form Designers can elect to use the Custom Validation Text which will announce the issue to the user in the words you wish to convey.

Possible standard error message:

Student Asset Amount	Asset Type
This field is required.	Cash, Savings and Checking Accounts
\$ 0.00	Investment value, including real estate:

Possible better error message:

Student Asset Amount	Asset Type
Please input a value of dollars and cents here. It is a required field.	Cash, Savings and Checking Accounts



Best Practice #5: Consider using custom validation text for users on inputs that could be confusing to certain users.

Settings for StudentAccountsAmount ×

Section

Field Type ☐ Mask input?

Minimum Length Maximum Length

☐ Calculated field?

Label Position

Custom CSS classes

Confidential?

Confidential page items will only show to the participants in this list

Custom Validation Text 

Tooltip

Tooltip Position

Allow prefill from URL?

226c43c0-c179-4114-8dec-231a37140a7b

With this Custom Validation Text input, the user can more clearly understand what is required from them if they made a mistake on the original submission and they are less likely to attempt and fail again.

6. Avoid using “Empty Links”.

People without impairment can scan pages to find links to useful information from within the context of a page and the content surrounding a link; however, people who use assistive technology like screen readers will not be able to quickly do the same if hyperlinked text is not clear.

For example, a screen reader user may open a list of links on a given page or tab from one link to the next. For this reason, links like “click here” and “read more” fail to provide the information needed for someone to reasonably understand what action that link will perform — and the issue is compounded when there are many links of this kind on a page.

Instead, use hyperlinks that are descriptive and clear so that everyone, regardless of how they’re interacting with a website, can confidently and easily navigate. Additionally, all links on a page that go to the same destination should use the same link text.



Best Practice #6: Instead of using “click here” or “check this out” as link descriptions, use more descriptive link labels like “click here to find out more about the FAFSA.” or “Check out the newest loan figures here”.

7. More about Hyperlinks...

This one was plucked from another tremendous resource for accessible forms and other form building considerations: <https://forms.sis.yale.edu/designer-resources/best-practices>.

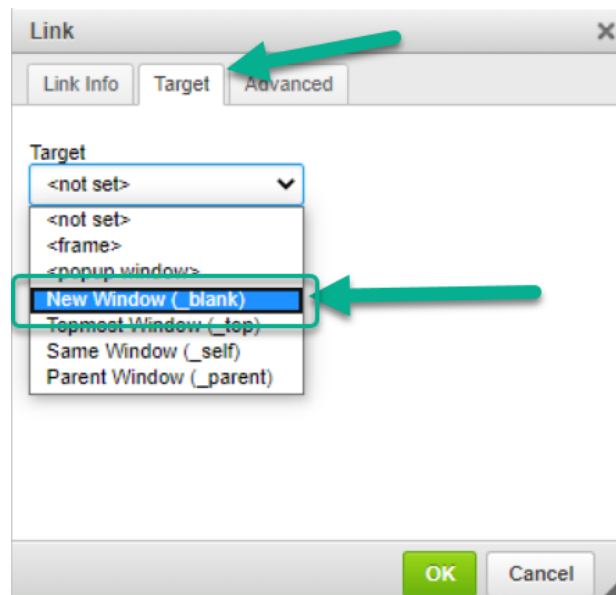
Underline all hyperlinks which includes emails and websites.



Best Practice #7: By default, hyperlinks are underline when hovered over, but to be ADA compliant, you must underline them so they are always displayed with the hyperlinked text underlined..

If referencing a website, be sure to go to Target tab and set it to open a New Window (_blank) so when participant clicks the hyperlink it will open that website in a new window, opposed to re-directing their current window which contains the form. This will allow the participant to easily go back to their form in the original window, so they can continue filling it out.

Example – Target tab is where you can configure the hyperlink for a website to open a New Window (_blank) when a participant clicks on it, as seen below circled in green:



8. Use Headers with Tables

Screen readers keep track of their location in a table by counting table cells. Screen readers also use header information to identify rows and columns.



Best Practice #8: Use a simple table structure for data only and specify column header information.

Student Asset Amount	Asset Type
	Cash, Savings and Checking Accounts
	Investment value, including real estate: - Trust funds, money market funds, mutual funds - Certificates of deposit - Stocks, stock options, bonds and other securities - Qualified educational benefits or education savings account (529 college saving plans and the refund value of 529 prepaid tuition)
	Note: Do Not include the home you live in, retirement 401(k) plans, pension funds, annuities, or non-education IRAs
	Net Worth** of Business and/or Investment Farm Value Market value of land, buildings, machinery, equipment, and inventory
	Note: Do NOT include the value of a small business if it has 100 fewer full-time employees. or Do NOT include the value of a family farm that you, your spouse and/or your parents live on and operate.

Avoid nested tables and empty tables spaces if you can. If a table is nested within another table or if a cell is merged or split, some screen readers lose count and can't provide helpful information about the table after that point. Blank cells in a table could also mislead someone using a screen reader into thinking that there is nothing more in the table.

9. Test your custom CSS.

Many Dynamic Forms clients choose to utilize their own CSSs (Cascading Style Sheets) on forms and this is still completely fine. However, be sure that items in your CSS also do not break accessibility. Again, testing the form with the CSS added will let us know if there is a problem.



Best Practice #9: Test your forms after you have added a custom CSS onto the form.

Your Dynamic Form might be absolutely perfect, but if your CSS introduces different color contrast issues, image issues or overrides an existing style of the Dynamic Forms stylesheet accessibility can be impacted.

10. Always test your forms before deploying to your website.

Yes, Dynamic Forms produces accessible forms, but as you will see from the items listed in this document, you still may want to double check the forms. All forms should be tested prior to moving to production for functionality reasons, anyway, so please consider adding an accessibility test as part of your move also.

Your institution may have already chosen their favorite testing tools (SiteImprove, etc.) or you can choose from the list below for great testing applications. Here are the tools we (and our third-party auditor) use for testing:

• Keyboard	• Magnifier
• JAWS	• Colour Contrast Analyser
• VoiceOver	• Web Developer Toolbar
• NVDA	• Code Inspection / Dev Tools
• Narrator	• Accessibility Insights for Web
• aXe	• ANDI
• Large Text	• Text Spacing bookmarklet by Patrick H. Lauke



Best Practice #10: Test before moving to production.