greenID GBG

Identity Solution

Best Practice Guide

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ABOUT THIS GUIDE

This guide will help you get started with the identity verification component of your customer onboarding journey.

It outlines best practices for presenting data collection fields to your customers, which will help you collect the data necessary to successfully verify their identities.

The guide also explains how to use database checks for electronic identity verification, mobile document/facial biometric verification and predictive address verification as part of a single onboarding journey.

VERIFICATION

Which verification checks should you use?

You can choose data checks, document checks or both. The choice depends on your business requirements and attitude to risk. GBG can help you decide which checks are appropriate.

Using both documents and data achieves the best results. Documents and faces should always be captured using a mobile handset to optimise the captured images.

Which approach to verification should you use?

Businesses using both data and documents can decide which of the two to start the onboarding journey with.

Starting with a document allows personal data (name, address, date of birth) to be extracted from the identity document (where present).

Starting with manual customer input allows their details to be compared against the data extracted from the document.

DOCUMENT-FIRST JOURNEY

> This is a mobile journey that starts by extracting personal data from an identity document, like a passport or driving licence, using a mobile-handset camera.

It reduces effort for customers, enables a better experience and improves data quality.

Verify Document

Capture identity document image using the mobile device camera for faster data extraction. Less friction for customer

`Verify_Document`

Facematch

Use the Facematch service to reduce the risk that an individual using the document is not the individual who owns the document

`Facematch`

Liveness

Use the Liveness test to reduce the risk that an individual using the document is not present at the time, and another image of their face was used during the Facematch process

`Liveness`

Capture Address

Use a document, for example a driving license, that contains an address. If the document collected does not contain an address then use this process to collect a valid and correctly formatted address, so that the next step can be carried out with maximum chance of success

`Capture_Address`

Verify People

Verify the information taken from the document submitted and additional information collected about the individual. Use the cleanse option on the address data if the document collected in step 1 had an address

`Verify_People`

The API verification service is listed under each step

Customer input

DATA-FIRST JOURNEY

> This is a mobile journey that starts with the manual capture of customer details.

Follow data capture best practice to minimise friction and foster customers' trust.

Capture Address

Customer to provide address manually that is then checked and correctly formatted to maximise matching in follow on processes

`Capture_Address`

Verify People

Verify data provided by the customer

`Verify_People`

Verify Document

Can be used to complement or supplement the data captured in capture address. Image captured with mobile device

`Verify_Document`

Facematch

Use the Facematch service to reduce the risk that an individual using the document is not the individual who owns the document

`Facematch`

Liveness

Use the Liveness test to reduce the risk that an individual using the document is not present at the time (and another image of their face was used during the Facematch process)

`Liveness`

The API verification service is listed under each step

Customer input

RECOMMENDATIONS FOR BETTER DATA CAPTURE FORMS

Completing registration forms can be time consuming. Follow these simple steps to make form filling quicker for your customers.

ACCESSIBILITY

Follow Aria guidelines on creating accessible forms for the web. Clear form labels, descriptions and error messages help all users.

For more information, visit:

- https://www.w3.org/TR/wai-aria-practices/examples/landmarks/form.html
- https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/forms/Basic_form_hints

FIELD LABELS

It's important a customer is clear what kind of information is required from them. HTML label elements and input placeholder attributes help.

Positioning labels above form fields is more effective than placing them alongside the fields, as they are easier to view on mobile devices and remove the need to scroll around or zoom in.

We also recommend against using labels inside input fields as this information is lost as soon as the individual begins typing.

An alternative is to use 'float labels' which move the inline label above the input after the individual focuses on the form field or enters a value. This provides a much more accessible, less frustrating experience.

1. **Give your fields unique identities.** Make sure each of your fields has a unique ID or field name. An ID which is related to the information you are expecting to capture is helpful, for example 'First Name'.

2. **Required fields.** Ensure that only genuinely mandatory fields are mandatory. For example, 'First Name' should be mandatory but not 'Middle Names'. Clearly labelling optional fields is good practice.

3. **Show/hide fields.** Displaying a limited number of fields on a single page makes the data capture process appear less daunting and simpler to use, especially on mobile devices.

Some countries refer to 'first' and 'middle' names as 'family name' or 'given names'. For simplicity, we advise always asking customers to provide their name as it appears on their identity document.

POINTS TO THINK ABOUT

These common mistakes are easily avoided:

Restrictive character limits

> **It's important that all your data fields are long enough to contain all of the customer's data.**

For example, the place "Mamungkukumpurangkuntjunya Hill" in South Australia.

Form field length

> **Match the length of the required field to the content. For example, don't make the postal code field the same size as a first line of address.**

This subtly shows the customer how to complete the field or what values are expected.

Drop-down menus

> **We recommend against using drop-down menus because of usability and accessibility issues.**

If you do use drop-down menus, use standard native elements and not your own Javascript.

Accessibility

> **When using HTML forms, code to the current W3C standards and use field-sets and form IDs where appropriate.**

Aria values should be present and contain the correct content for fields shown. On native mobile, allow platform specific assistive features like dynamic font sizing and voice support.

Show the correct keyboard for HTML forms on mobile

> **To help mobile users enter information quickly and accurately, set the correct input type on the form fields.**

For example, set input type="tel" displays the numeric keypad.

Mozilla has a good reference guide at: https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input

Allow autocomplete on forms

> **Customers typically allow browsers to store their contact information (e.g. name, address and even phone numbers).**

Turning on the option to autocomplete enables faster form filling and should help prevent any incorrect values being entered.

Google estimates that users with autocomplete turned on fill out forms up to 30% faster.

You can find out more at: https://developer.mozilla.org/en-US/docs/Web/HTML/Attributes/autocomplete

Turn off Autocorrect

> Autocorrect on HTML forms can offer suggestions for misspelt words.

This should be turned off for most fields in this application like names and addresses.

Turn on Autocapitalise for name fields

> This auto capitalises names and can help to normalise data.

DATA-FIELD GUIDANCE

> **Validate field input on blur where possible and show appropriate error states and messages.**

Error messages should explain the problem and guide customers towards fixing it.

First name

- Mandatory field.
- Ask the customer to enter their name as it appears on their identity documents.
- Allow all characters and numerics for a name.
- Minimum of two and maximum of 150 characters.
- Remind the customer they must enter any additional names in the Middle Names field.

Suggested validation failure message for individual:

Error Type	Suggested error message
No text entered	Please enter your first name as shown on your identity document
Longer than 150 chars (if applicable)	Too long, please check you have entered your first name correctly

Middle names

- Optional field (only if it appears on the customer's identity documents).
- Ask the individual to enter their name as it appears on their identity documents.
- Allow all characters and numerics for a name.
- Minimum of two and maximum of 150 characters.

Middle name *(optional)*

Your middle name(s)

Only required if this appears on your ID documents

Suggested validation failure message for individual:

Error Type	Suggested error message
Longer than 150 chars (if applicable)	Too long, please check you have entered your middle name correctly

Last name / family name

- Mandatory field.
- Ask the customer to enter their name as it appears on their identity documents.
- Allow all characters and numerics for a name.
- Minimum of two and maximum of 150 characters.

Last name *

Your last name / Family name

As shown on your Passport or ID Document

Suggested validation failure message for individual:

Error Type	Suggested error message
No text entered	Please enter your last name as shown on your identity document
Longer than 150 chars (if applicable)	Too long, please check you have entered your last name correctly

Date of birth (birthdate)

- Mandatory field.
- As it appears on their identity documents.
- Present the field in the format DD/MM/YYYY.

Consider the date format used by the majority of your customers and request the date in that format to reduce the number of errors. We suggest always providing examples of how you want the date to be entered.

Date of Birth *

DD/MM/YYYY

Example: 29/08/1980

Date of Birth *

29 /__ /____

Example: 29/08/1980

Flag without processing any birth dates over 120 years old.

Suggested validation failure message for individual:

Error Type	Suggested error message
No text entered	Please enter your date of birth as dd/mm/yyyy e.g. 29/06/1980
Unknown format	Check your date of birth matches the format of dd/mm/yyyy e.g. 29/06/1980
Future date (add restriction but still show error if entered past today's date)	Are you from the future? Check your date of birth again
Past date (over 120 years old)	Are you a time traveller? Check your date of birth again

Use field-masking for date input where possible. Field-masking is a technique that helps users complete form fields such as date of birth. Masking automatically formats the data upon entry so the slashes will automatically appear in the correct places, validating the data entry as the user types.

Addresses

- Mandatory field.
- Predictive address capture is the most effective way to capture customer addresses. To understand the complexities around address capture, please see the separate section in this guide.
- Alpha numeric character validation (plus hyphen) with minimum of two and maximum of 100 characters.
- Examples of unusual length addresses include Mamungkukumpurangkuntjunya Hill in South Australia.

Address *

Start typing your address or postal code

Example: WR5 3FT or 'Flat 8

Error Type	Suggested error message
Incorrect format	Please re-enter your details using only letters from the alphabet and hyphens (-) if applicable.

Title

- Optional field.
- If you must request a title, make it a free-text field entry rather than a dropdown or select field (to avoid being prescriptive).

Title *(optional)*

Eg: Mr, Mrs, Miss, Dr

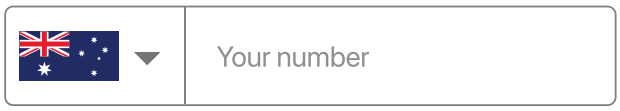
Your title as it appears on your Passport or ID documents.

No validation required on this field.

Phones

- Mandatory field.
- Provide an international country code (e.g. +61) picker, defaulting to your primary country. For Australia, validate the number based on significant digits and length.
- Remind individual to enter mobile number without leading zero.

Phone number *



Mobile numbers starting with 07 or your UK landline.

Error Type	Suggested error message
Incorrect format	Please re-enter your phone number using numeric characters only, with an initial 4 (if validation is for mobile number)

Gender

We recommend you do not ask for gender as it is not required for identity verification.

Driving Licence

- This field should only be used where there is a requirement to validate a driving licence.
- The length of the driving licence number should be between 1 and 10 alphanumeric characters.
- It should not contain spaces or special characters.

Driving Licence *(optional)*

Your Driving Licence number

As shown on your Driving Licence. Get help with locating the number here.

Error Type	Suggested error message
Incorrect format	Please re-enter the number in the format displayed on your licence

FORM FIELDS - LAYOUT

Make the most of your manual data entry with clear, accessible form design. These guideliness provide you with a good foundation for creating a great form for data capture. Use logical groupings and fieldsets where appropriate.

First name *

James

As shown on your Passport or ID document

Middle name *(optional)*

Your middle name(s)

Only required if this appears on your ID documents

Last name *

Your last name / Family name

As shown on your Passport or ID Document

Date of Birth *

DD/MM/YYYY

Example: 29/08/1980

Address *

Start typing your address or postal code

Example: WR5 3FT or 'Flat 8

Your full name (required)

Date of Birth (dd/mm/yyyy) (required)

House name or number (required)

First line of your address (required)

Town / City / County (required)

County (required)

Postal code (required)

Do

- Place the label above the form field
- Use helper text to give more context and to give examples
- Allow a comfortable distance between elements
- Make the forms clear and easy to read
- Choose colours wisely. Always check for accessibility
- Use placeholder text to guide user input
- Make field length appropriate to the input. Date of Birth for example should not be the same length as name
- Indicate optional and required fields
- Follow accessibility best practice such as Aria or mobile platform specific guidelines

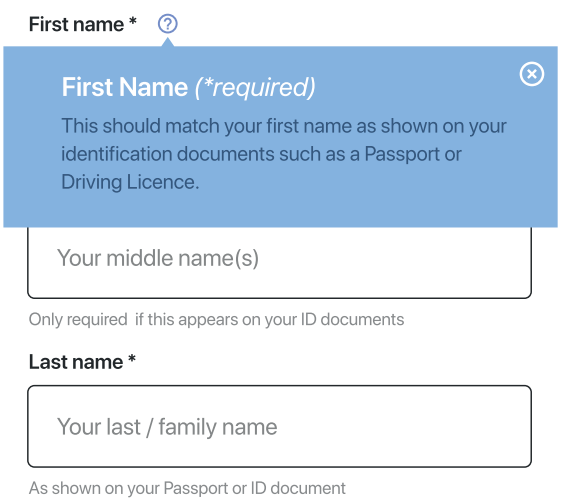
Don't

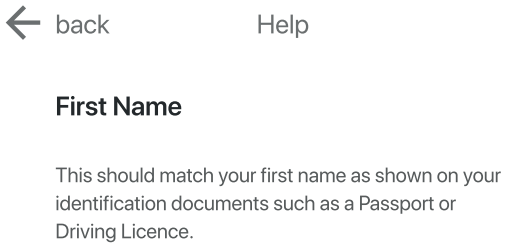
- Have form labels inside the fields

  (Unless you are following Google's Material Design where the label moves to the top on focus)
- Use low contrast colours
- Use colours where a field could be seen as disabled
- Reduce whitespace between fields or padding in each field
- Remove entry guidance and help suggestions
- Not show optional fields
- Have all form fields the same length
- Use dropdown menus sparingly, default to native when possible

FORM FIELDS - HELP

Offer the user contextual help where needed. Help should be timely, focused and written in an easy to understand way. Be mindful of mobile viewports and scrolling when designing.





Do

- Offer contextual help where needed to guide the user on how to best fill out that field
- Be clear and concise in the text
- Make it obvious how to dismiss the help. Understand mobile tap targets

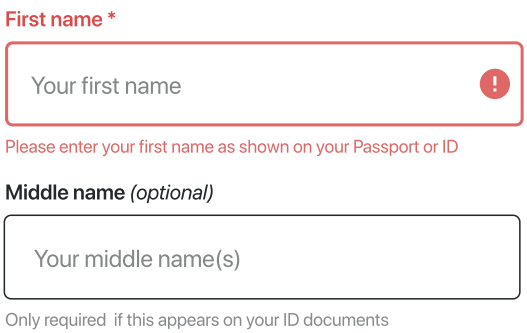
Don't

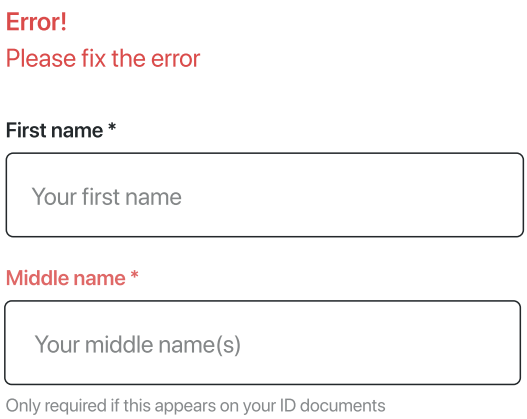
- Take the user to another page for help on a field. This can break the flow and understanding for a user, especially if the action spawns a new window
- Beware of injecting help context inline as this could cause the page content to jump downwards

FORM FIELDS - ERRORS

Communicating error states on forms should be contextual and clear about how to rectify the error. Use both visual iconography and colour to highlight the problem field.

Error messages should be clearly written and not 'technical' speak.





Do

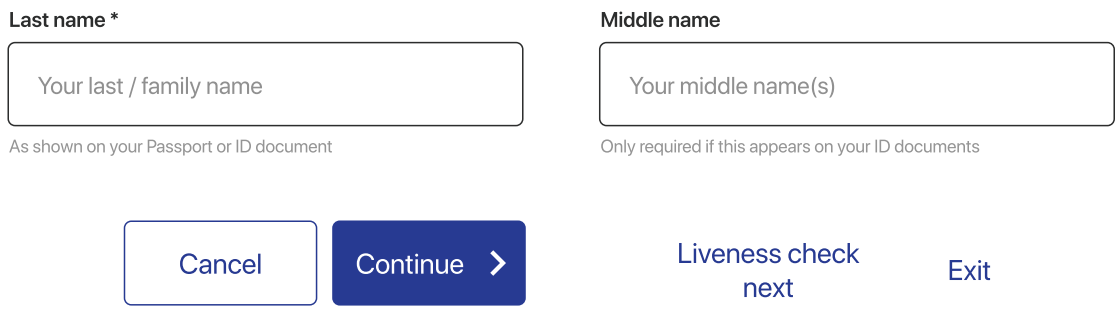
- Highlight errors in form fields. Use colour and also visual iconography
- Validate form fields on blur where possible to give instant feedback on error state
- Prevent form submission via disabling the call to action button
- Show inline error messages vs at the top of the form especially on mobile

Don't

- Rely solely upon an error message at the top of a form
- Only use colour as an indicator to a problem with a field
- Be ambiguous about the error and description

FORM FIELDS - BUTTONS

Form buttons should describe the action that they perform if a user taps them. Avoid button labels that are too long and be aware of different types of button depending on hierarchy.



Do

- Be clear about the call-to-action and label accordingly. Words like 'Continue' and 'Next' are commonly used
- Consider adding an arrow when the call-to-action will take you to another page or screen. Adding an arrow can reassure the user of that next step
- Primary call to action should be visually prominent compared to secondary call-to-action
- Consider using outlined or just plain text links for secondary and tertiary call to actions
- Position buttons according to action. Right naturally indicated progression, whereas left can hint at regression

Don't

- Make primary and secondary calls-to-action look the same
- Use non standard placement
- Have Cancel on the right (unless it's the Primary call-to-action)
- Unclear next step as button title

GUIDANCE FOR MOBILE DOCUMENT CAPTURE FOR YOUR CUSTOMERS

While GBG customers can choose which document types to accept, there are some important rules to follow:

Do

- Capture live, not previously scanned documents.
- Use secure identity documents. We recommend only passports, driving licences and national identity cards. The most secure documents are ICAO Passports with NFC chip technology.
- Use our extensive document library (if a document is not yet available, we can work with you to add it).

- Be aware that proof of address documents can be easily forged (as they don't contain security features). Using data as well as documents to match a customer to an address mitigates this.

- Use liveness detection to confirm the person creating the new account is the same as on the ID provided. Facial movement confirms the person is not just a fraudster with a second photo.

Don't

- Accept documents older than 10 years.

- Accept photocopies of documents.

- Accept poor-quality documents which will likely fail the checks (professional fraudsters will attempt to provide the worst quality possible, to bypass as many security checks as possible).

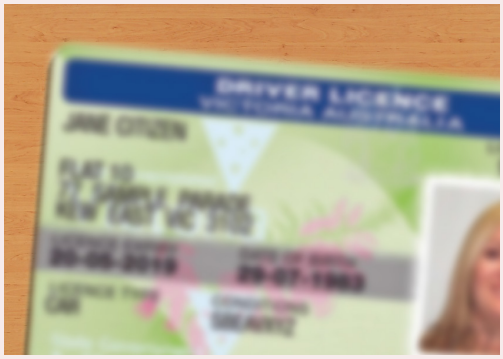
DOCUMENT IMAGE QUALITY AND KNOWN LIMITATIONS

Acceptable

- Licence fits the within the frame
- Only contains a single document
- Good overall exposure
- Image is sharp and not blurred
- No bright areas or shadows, eg camera flash
- Image is flat and not skewed or angled
- Full colour and not black and white

Not Acceptable

Image is blurred and skewed



Slightly blurred

Too dark

Dirty

Not Acceptable

Distorted

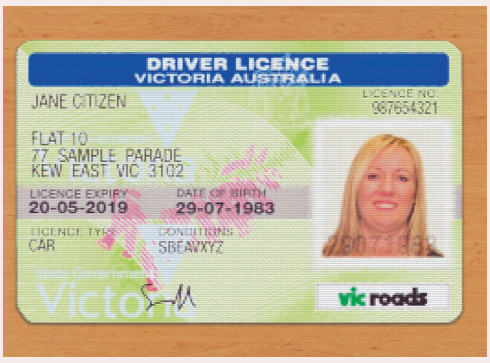
Camera flash

Glare

Black and white

Hologram

Low quality



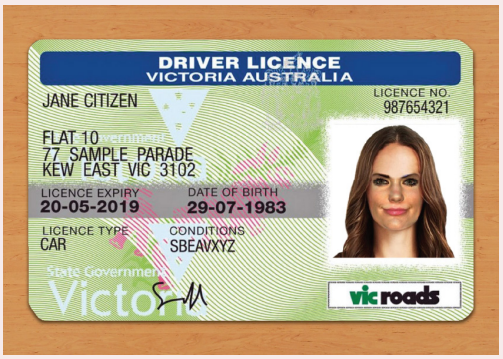
Not Acceptable

Shadow

Skewed

Too small

Tampered



Colour wash

Washout

Guidance for your customers when capturing ID documents on mobile

While GBG customers can choose which document types to accept, there are some important rules to follow:

- Camera should be a minimum of 8MP
- Image must not be blurred
- Image must be in colour
- Image must have clear edges
- The document image should be captured at an angle of 90 degrees to the document
- Avoid excessive overhead lighting that can cause glare on the document
- Facial image (selfie) should be taken with the individual looking directly at the front-facing camera (to ensure that all facial features are visible)
- The individual's face should not be obstructed by hair or other objects
- Avoid exaggerated head movements when taking the facial image
- Good ambient light conditions should be used for both image capture processes

ADDRESS CAPTURE

PREDICTIVE ADDRESS CAPTURE

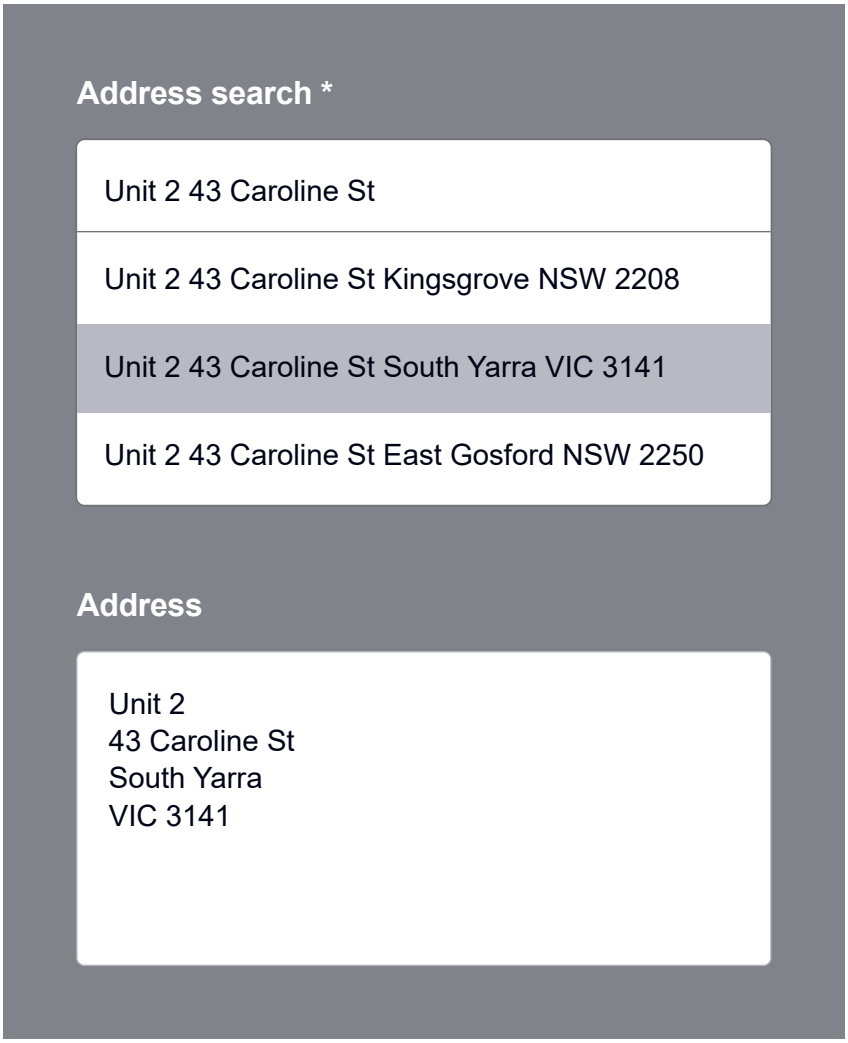
Address validation improves customer experience by identifying inaccuracies and data missing from their address details. It also standardises addresses (e.g. against Australia Post's Postal Address File).

It's essential to ensure the correct address is captured for identity validation and to ensure that physical products (e.g. cards) are delivered to the correct addresses.

Predictive address capture simplifies the process for customers by allowing them to enter part of their address and immediately see the rest of the address auto populated. It provides intuitive flexibility by allowing an address to be entered starting with street or postcode.

Predictive address capture is more effective on mobile devices because it avoids the need for lengthy and awkward postcode dropdown lists.

Predictive address capture ensures that only addresses in the individual's own country are presented via IP address geolocation.

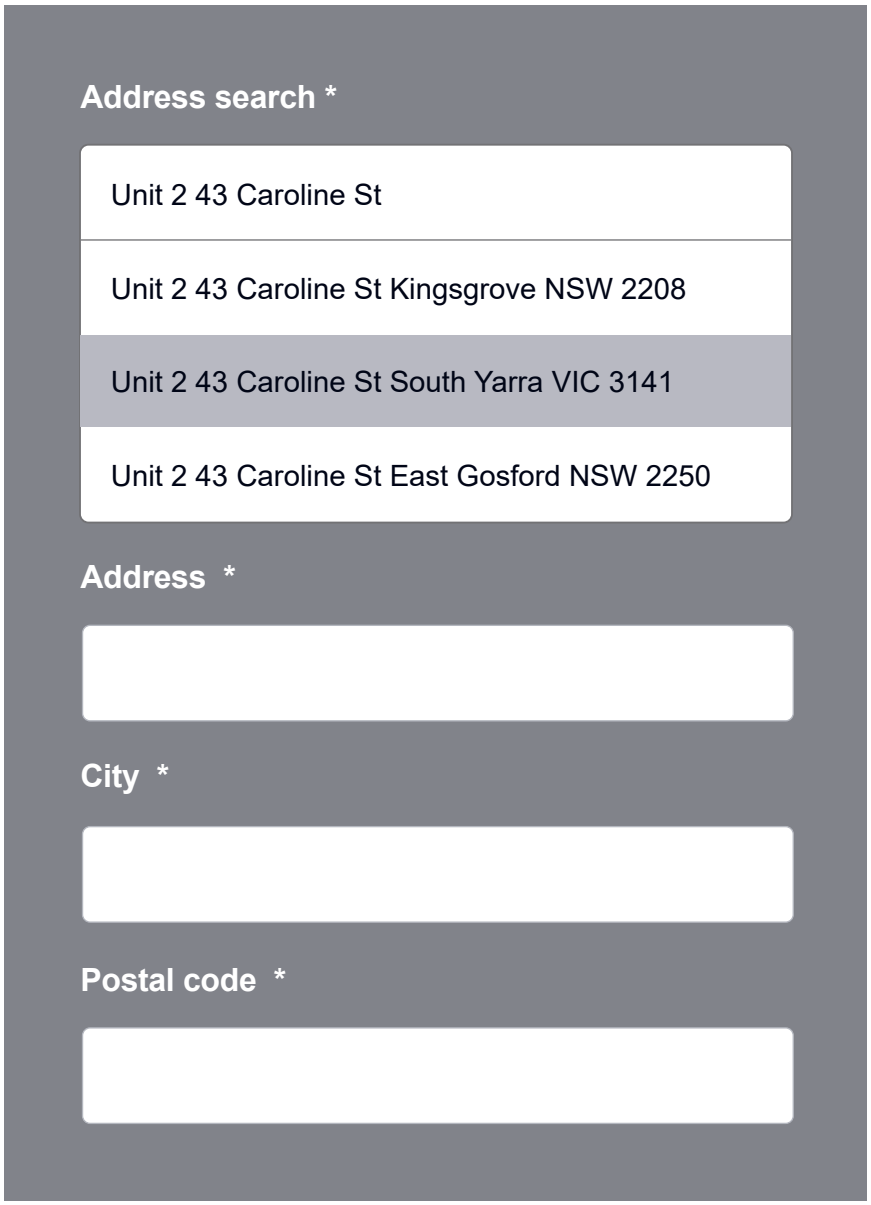


ADDRESS SEARCH OPTIONS

There are three options for using address search.

Separate search fields

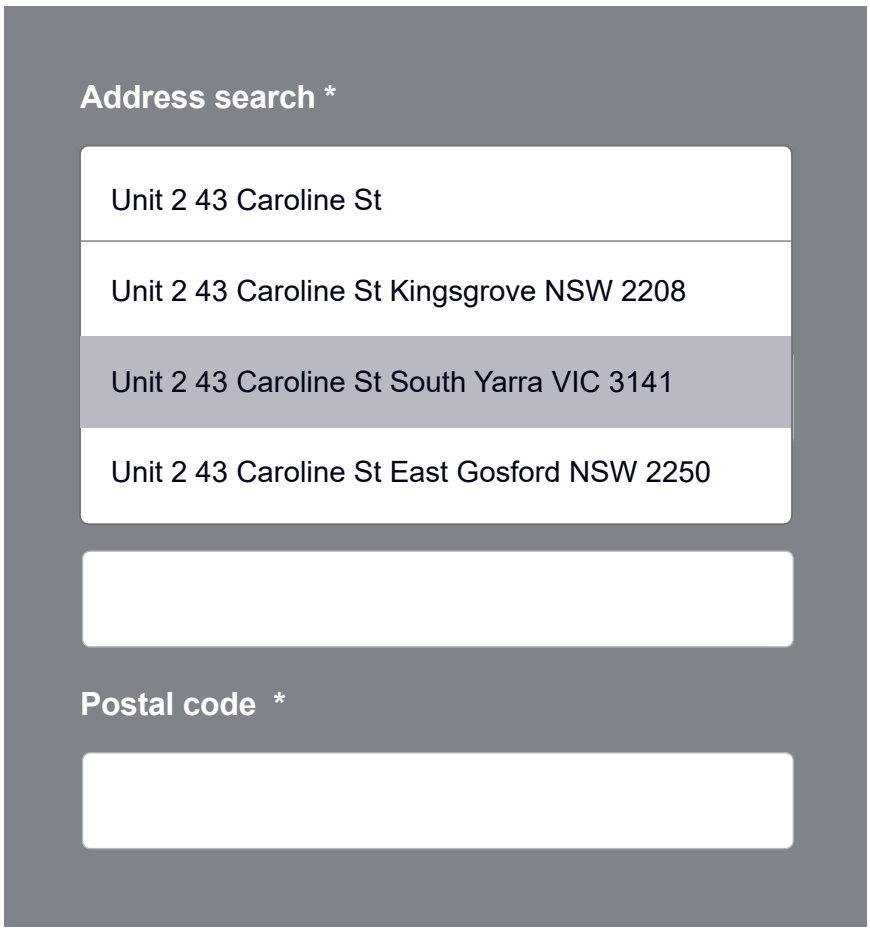
With this option, the search field is separate from the other address fields and contains the address search functionality. Once an address is selected by the customer, the other fields are automatically populated.



This approach presents an address form layout that is familiar to many. We recommend positioning the search field above the address form as this saves the customer from attempting to enter their address manually before coming across the powerful search features of an address finder which uses autocomplete.

Bound fields

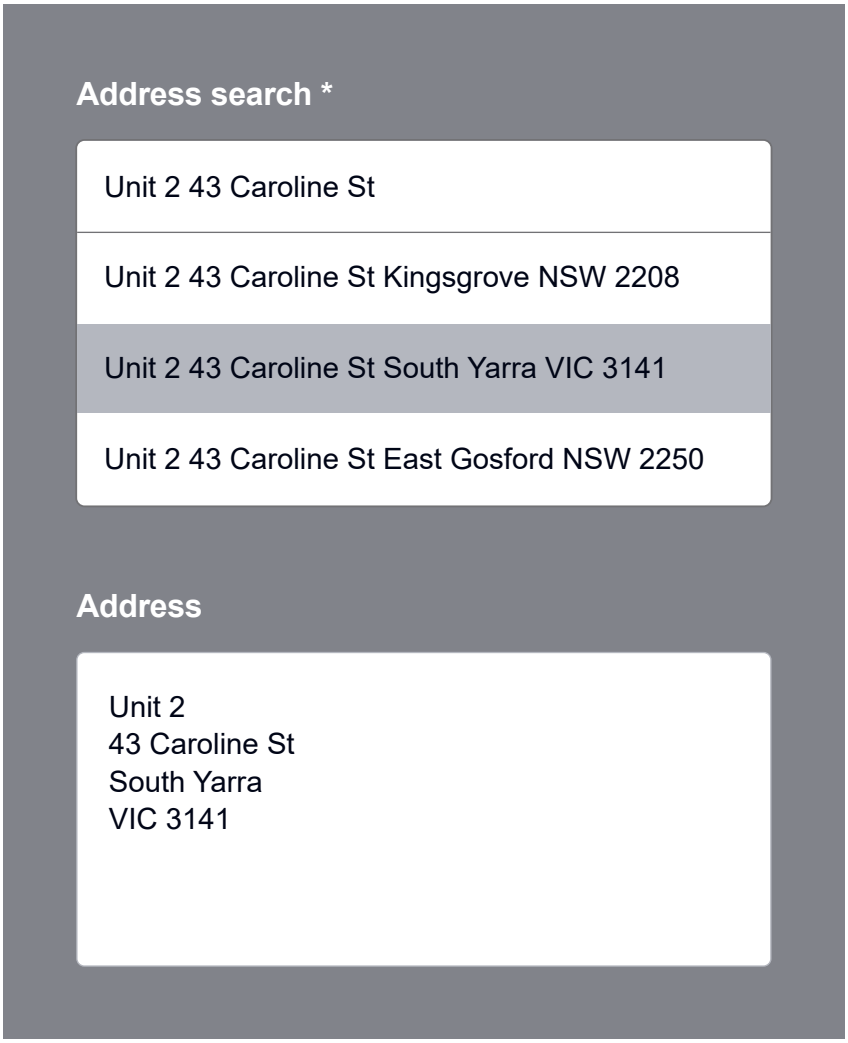
This method binds the address search functionality to as many of your address form fields as you choose. Selecting a matching address in any field completes the remaining address fields.



Single line

This layout simplifies an address form down to just one field. Selecting a match reveals the correctly formatted address. Address forms can occupy far less space when implemented this way.

Our most recent research suggests the single line approach is far more intuitive when using predictive solutions than putting the search on the 'Address line 1' of a complete field set.



This is because of the mental model of entering address information. It's a very common, often-repeated process that customers become accustomed to, and if they see a complete set of fields, they expect to go through the process of entering their information in the traditional manner. Some individuals can then get confused when this process is interrupted by the appearance of the address suggestions.

A single field, however, puts the customer in the mindset of searching and then selecting a result. It's helpful and makes the process of checking out quicker and more accurate.

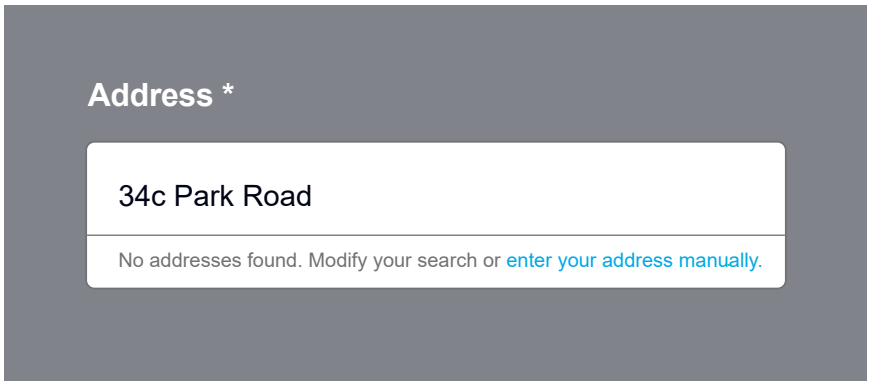
Single field implementation also reduces the number of fields that are strictly required, which on mobile makes the form shorter and less intimidating. The less an individual has to switch between different controls/fields, the less likely it is they will encounter a barrier.

ALLOW AN INDIVIDUAL TO ENTER AN ADDRESS MANUALLY

Our address data is updated monthly in Australia, so it's rare that an address can't be found, but it's always a good idea to allow your customers the option to manually complete their address if it can't be found.

No database is 100% accurate. There may be addresses that genuinely exist but don't appear in the postal address files. There may also be situations where an individual may need to alter an address manually after it has been auto-filled.

For example, certain premises can often be listed as single premises. This can cause difficulties when a customer's building number isn't included in the listing. Therefore, it's a good idea to allow them to manually update the first line (or the entire address) after the address has been looked up.



SUMMARY

While this guide represents our recommendations, we always advise businesses to test their own implementation with customers and refine accordingly.

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