

SHANNON MAY HALL

# SAINSBURYS: SELF-CHECKOUT EXPERIENCE CASE STUDY





# Hey, I'm **Shannon May**, a Visual UI designer living in Essex

I'm a passionate creative that has worked across print, digital and social media design. My career began with a certification in computer science but quickly moved into more creative spheres, where I've been creating design solutions ever since.

I have recently focused my study on visual UI/UX design, culminating in a UX design certification from the School of UX. I'm interested in the gaming and education sectors especially, and would love to work with you on your next project!



# Self-checkout

*Redesigning the Sainsburys' self-checkout UI without the bagging area for small shops*

## WHAT'S THE PROBLEM?

The premise for this case study was to envision an update for Sainsbury's self checkouts based on some key data-driven conclusions:

- Shoppers get frustrated with the bagging area not weighing items correctly, slowing down their checkout experience.
- Nectar card signups, that provide shopping discounts, have been declining.
- Customers find looking through the list of scanned items on screen difficult.
- Complex transition animations between screens frustrate customers as the hardware the self checkouts are running on runs slowly and sometimes freezes.

[SKIP TO THE FINAL SCREENS & PROTOTYPE](#)

### Banana Fairtrade Loose £0.10

0.100kg NET x £0.97/kg

Total items: 1

Look up item

Enter barcode

0.000kg

Purchases monitored to ensure better service >d=0.005kg / Max 15.000kg Min 0.1kg / Nmax 3000

Subtotal £2.35

Check out £

### Your Basket

Scan your card to save

	Quantity	Price
	1	£2.50 £1.80
	1	£21.95
	1	£4.25
	1	£2.50 £2.20
<b>Subtotal: £100.00</b>		



Scan again  
OR

Confirm  
and Pay

My item does not have a barcode

Remove item from basket

Cancel transaction

Request Assistance

# Design review

*Initial design review, formed from my professional opinion and data provided in the initial problem statement*



## WHAT WORKS

- ✓ Clean UI with clear delineated sections, making navigation easy for the user.
- ✓ Large buttons for ease of pressing make the software very accessible.
- ✓ Clear use of Sainsburys branding that we want to take forward and perhaps even enhance with Sainsbury's secondary brand colour.

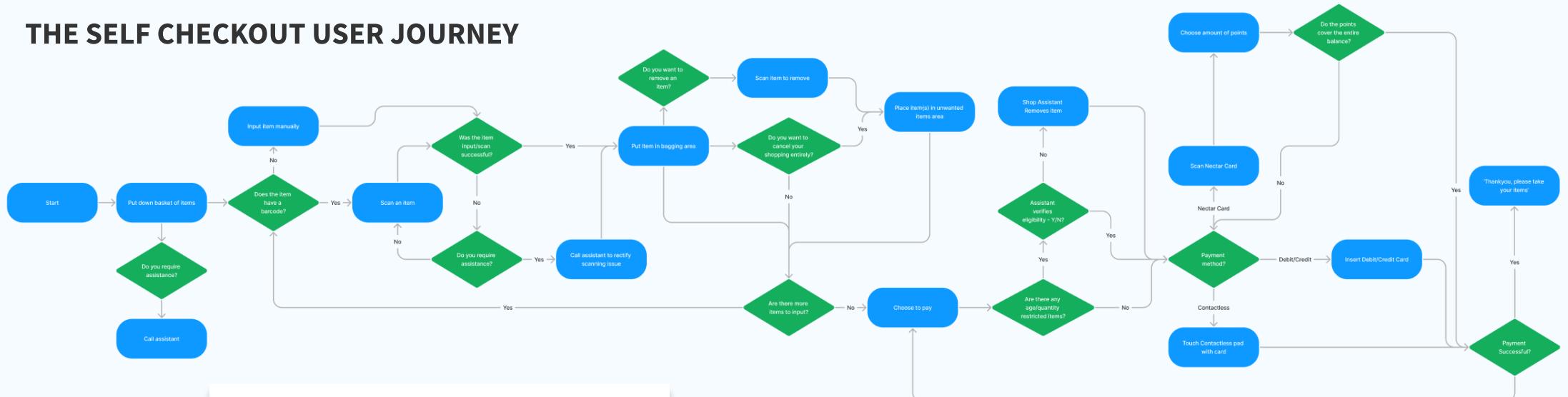
## WHAT COULD BE IMPROVED

- ? Visual clarity of the list of scanned items. This could be improved with actual product images.
- ? Nectar card integration is minimal, and could be higher to encourage future signups.
- ? Slow transitions between checkout pages could be mitigated with simpler animations, or eliminating unnecessary animations.
- ? The path to remove items from the basket is not clear. We do not want to directly encourage this behavior, but we do not want to make it unnecessarily difficult.

# User journey

*Understanding the journey of a shopper using a self checkout system*

## THE SELF CHECKOUT USER JOURNEY



**Are you sure you wish to cancel your shopping?**

No, cancel my transaction

No, go back to my basket

Request Assistance



Thankyou for shopping with

# Sainsbury's

Print Receipt

Next Customer

## UNHAPPY PATHS AND ERROR STATES

Users are not always going to have a perfect experience - this user journey also covers the unhappy paths of a shopper, such as having to cancel an item or a payment is declined.

# Information architecture

*Displaying information clearly to the shopper is an integral part of the checkout process*

Nectar card integration is minimal, and could be higher to encourage future signups.



## NECTAR DISCOUNTS

Discounted prices are now displayed beneath the standard item price - As well as the prompt in the upper right corner, this encourages the user to scan their nectar card to obtain these discounts. There is also an additional nectar card nudge just before payment.

Quantity	Price
1	£2.50 <small>£1.80</small>

Quantity	Price
1	£2.50 <small>£1.80</small>
1	£21.95
1	£4.25
1	£2.50 <small>£2.20</small>

**Subtotal: £100.00**

**Sainsbury's**

## ITEM IMAGE INTEGRATION

Using data from the existing online Sainsburys product database, preview images can be used during checkout to visually confirm the item that the shopper has just scanned.

Visual clarity of the list of scanned items. This could be improved with actual product images.



# Accessibility

*Accessibility is very important for a system used by a wide variety of shoppers with a wide variety of needs*

## WCAG VALIDATION

The checkout software design is compliant with the 2.3 Web Content Accessibility Guidelines.

- ✓ Legible text sizes and large buttons
- ✓ AA Standard colour contrast ratios
- ✓ Short load / response times

Handgloves	
#FFFFFF	#7F0442
Contrast Ratio	10.5 : 1
Normal Text	AA AAA
Large Text	AA AAA
Graphics	AA

## VISUAL ACCESSIBILITY

The design was tested using visual impairment simulation tools - the new design is suitable for colour blind users, users with light sensitivity, and users with vision acuity.

## PERFORMANCE

Animations are now only used on the initial screen, and the final screen of the system to minimise lag and help prevent crashes (This gives a better user impression at both the start and end of their experience, and improves usability during the actual scanning and payment stage)

Slow transitions between checkout pages could be mitigated with simpler animations, or eliminating unnecessary animations.



Pass

## Total Color Blindness

Total color blindness is much less common, (less than 0.001%) but it's an effective rubric to check for design efficacy. If your design is working without color, it is also likely also well organized, using reasonable hierarchies, and clearly laid out.

## WCAG AA Compliance Guidelines

- Add redundant UI signals for states.
- Error and success conditions should be

Simulate

Reset

# Wireframing

The wireframes were achieved with a combination of figma tools and Sainsburys' design system Luna, to make sure that the final design followed Sainsburys existing brand style.

Scan your first item

Sainsbury's

Your Basket

Quantity	Price
1	£2.50
1	£2.00
1	£4.25
	<b>Subtotal: £10.00</b>

Scan your card to save

Scan again OR Confirm and Pay

Sainsbury's

Payment

Payment Due: £100.00

Scan your card to save

Don't Forget! Save £2.00 with Nectar

Sainsbury's

An assistant will be with you shortly

Sainsbury's Staff Login

Choose an Item

Vegetables	Bakery	Fruits
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Sainsbury's Report Assistance

Payment

Please follow the instructions on the PIN pad

Sainsbury's Report Assistance

An assistant will be with you shortly to verify your age

Sainsbury's Staff Login

Bakery

Morning apple loaf	Ercoded bagels	Bundled bakes	All bakes combined	Mashed custard	Pork de mala

Sainsbury's Report Assistance

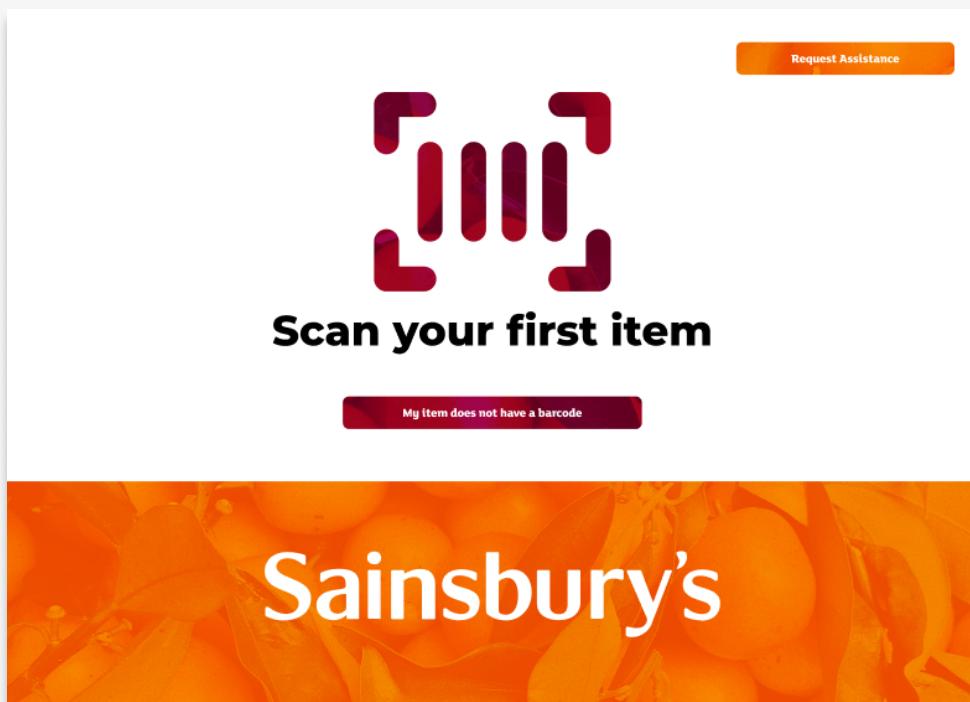
Payment

Payment Processing, Please Wait...

Sainsbury's Report Assistance

# Prototype Screens

You can access the interactive prototype at  
[www.shannonmay.co.uk/sainsburys.html](http://www.shannonmay.co.uk/sainsburys.html)



The screen shows a "Your Basket" header with a shopping bag icon. On the right, a purple banner says "Scan your card to save nectar". Below the basket, there is a red button with the text "Scan again OR Confirm and Pay". At the bottom, there are three smaller buttons: "My item does not have a barcode", "Remove item from basket", and "Cancel transaction". The Sainsbury's logo is at the bottom center. The background has a purple and red floral pattern.

Quantity	Price
1	£2.50 + £1.80
1	£21.95 <small>Age verification required</small>
1	£4.25
1	£2.50 + £2.20
<b>Subtotal: £100.00</b>	

**Are you sure you wish to cancel  
your shopping?**

[Yes, cancel my transaction](#)

[No, go back to my basket](#)

[Request Assistance](#)

Sainsbury's

[Request Assistance](#)



**Please place the items  
in the put-back trolley**

Sainsbury's

[Request Assistance](#)



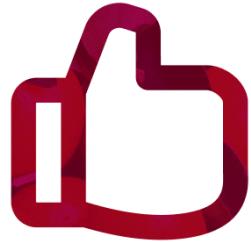
**Please place the item  
in the put-back trolley**

Sainsbury's



**Scan item to remove from basket**

Sainsbury's



An assistant will be  
with you shortly

# Sainsbury's

Staff  
Login



An assistant will be with you  
shortly to verify your age

# Sainsbury's

Staff  
Login

Choose an Item ⚙

Vegetables



Bakery



Fruits



My item is not listed

# Sainsbury's

Request Assistance

Bakery ⚙



Plain white bagels



Seeded baguette



Seeded baton



All butter croissant



Almond croissant



Pastel de nata



Bramley apple lattice  
Danish pastry



Madagascan vanilla  
Danish pastry



Multiseed loaf - Taste  
the difference



Pain au chocolat



Pain aux raisins



Wholemeal bakery roll

# Sainsbury's

Request Assistance

## Fruits ☰



Sainsbury's

Request Assistance

## Vegetables ☰



Sainsbury's

Request Assistance

## Payment



**Don't Forget!**  
Save £2.00  
with Nectar

**Payment Due:**  
**£100.00**



Sainsbury's

Request Assistance

## Payment



**Please follow the  
instructions on the  
PIN pad**

Sainsbury's

Request Assistance

## Payment



**Payment Processing,  
Please Wait...**

Sainsbury's

**Enter Quantity**

**How many?**

A quantity input field with a purple border. The number '1' is centered inside the field. To the left of the field is a purple少号 (<) and to the right is a purple多号 (>).

Add to basket

Sainsbury's

Request Assistance

Thankyou for shopping with

# Sainsbury's

Print Receipt

Next Customer

# Like this case study? Hire me!

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Or see the rest of  
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