

# Product Detail Page Conversion Optimization Experiments

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Business Team presentation



# Disclaimer

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This presentation uses adjusted figures for confidentiality purposes.  
Analytical approach and insights remain directionally accurate.

# Agenda

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- Problem statement:
  - Sticky Add-to-Cart on PDP
  - Photo Grid improvement on PDP
- Current Layout & Proposed Variations
- Hypothesis & Success metrics
- Test Design & Experiment Setup
- Results
- Conclusions
- Next Steps

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# **Sticky Add-to-Cart on PDP**

# **Sticky Add-to-Cart on PDP - Problem statement**

## **Business context**

- Product Detail Pages (PDPs) drive 70% of traffic, but only 4% of visitors add-to-cart
- Improving on-page conversion is a priority to unlock incremental revenue without additional spend

## **Leadership question**

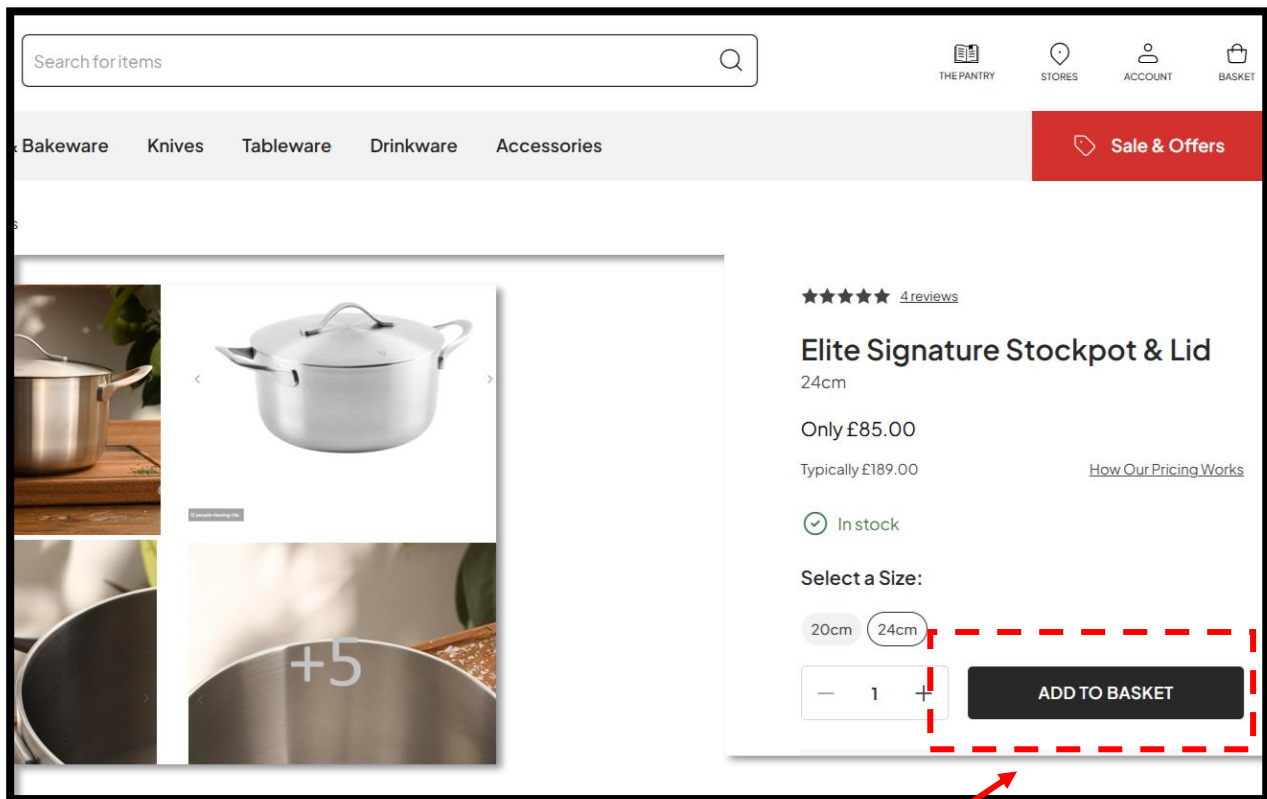
- Does making the add-to-cart (ATC) button persistently visible reduce purchase friction and increase add-to-cart conversion on PDPs?

## **Decisions to be made**

- Should we roll out a sticky add-to-cart component across PDPs?
- should it be deployed universally or targeted to specific devices?

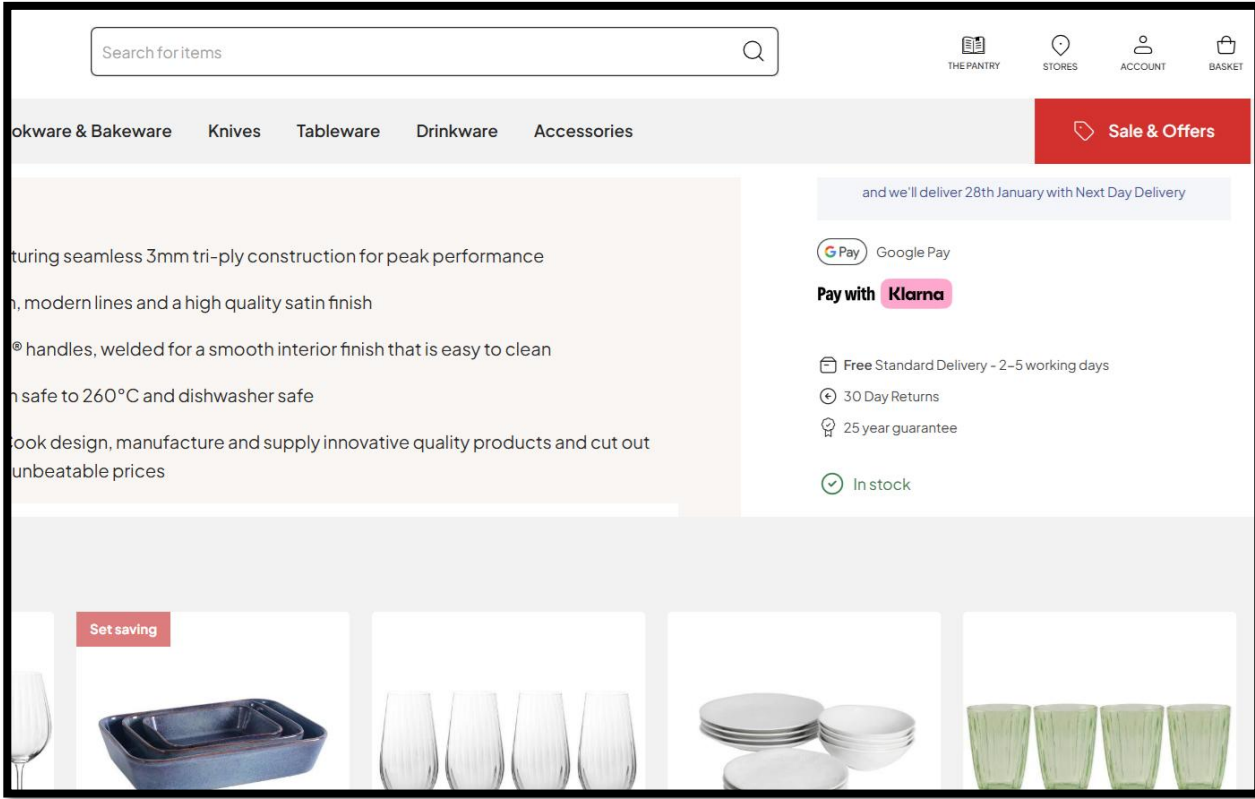
# Sticky Add-to-Cart on PDP – Current Layout

View on Page Load



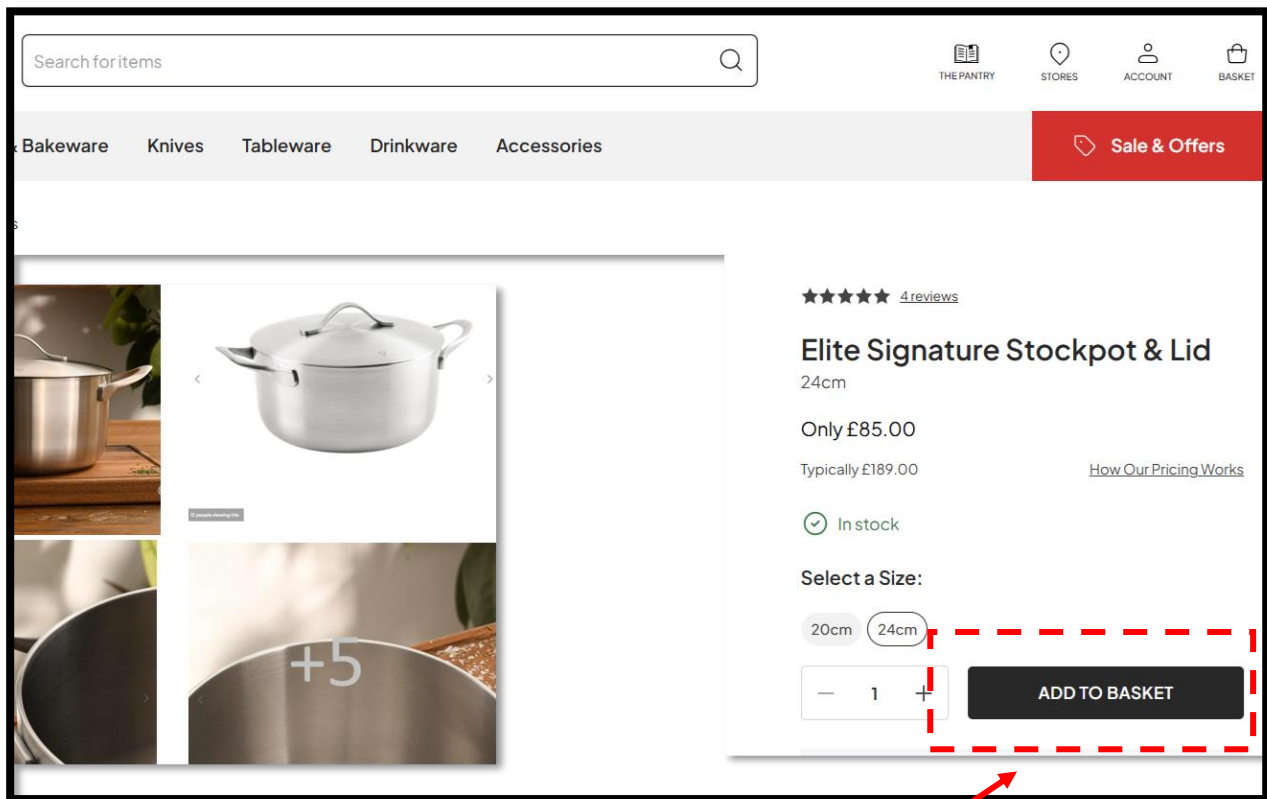
ATC is visible

View after Scrolling



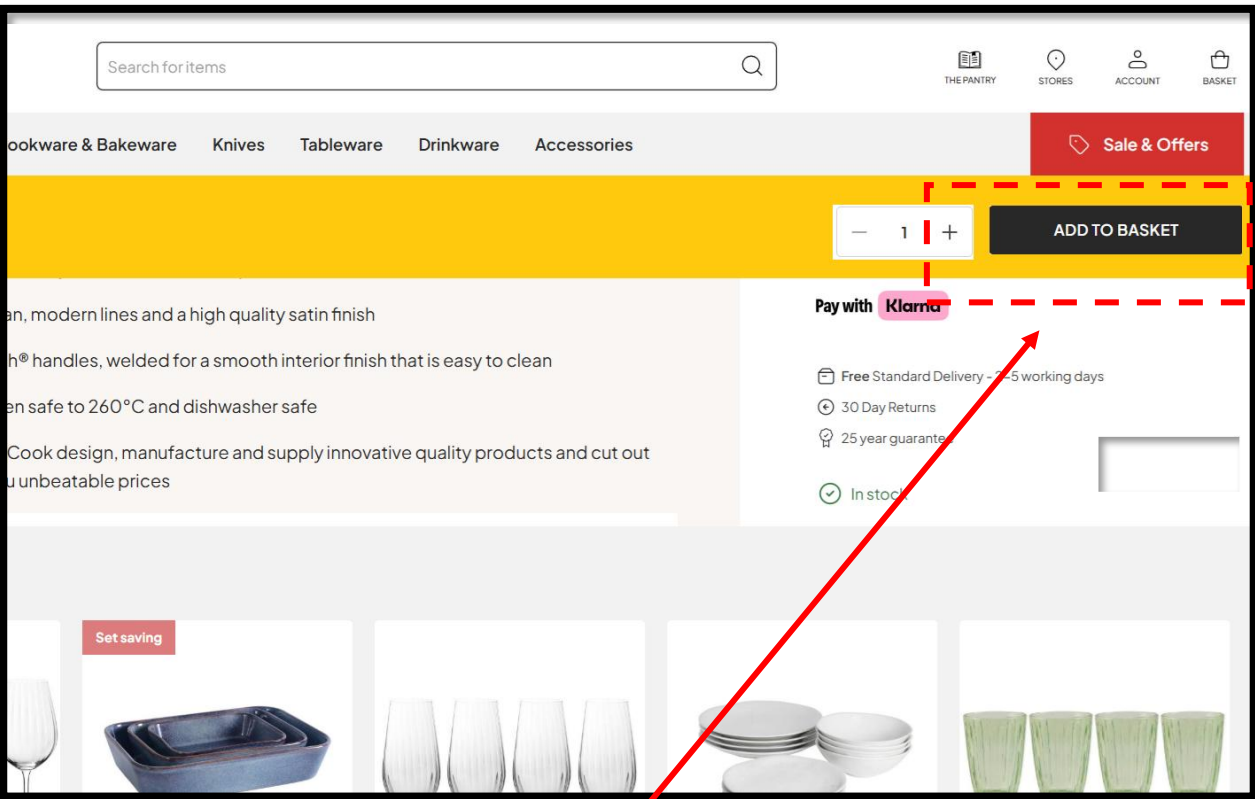
# Sticky Add-to-Cart on PDP – Proposed Layout

View on Page Load



ATC is visible

View after Scrolling



ATC is visible

# **Sticky Add-to-Cart on PDP – Hypothesis & Success metrics**

## **Hypothesis**

Making the add-to-cart CTA persistently visible on PDPs will increase add-to-cart conversion by reducing purchase friction, without negatively impacting user experience

### **Key metric**

- PDP visit to ATC conversion

### **Secondary metrics**

- PDP ATC to Order conversion
- PDP Exit rate
- PDP Scroll rate

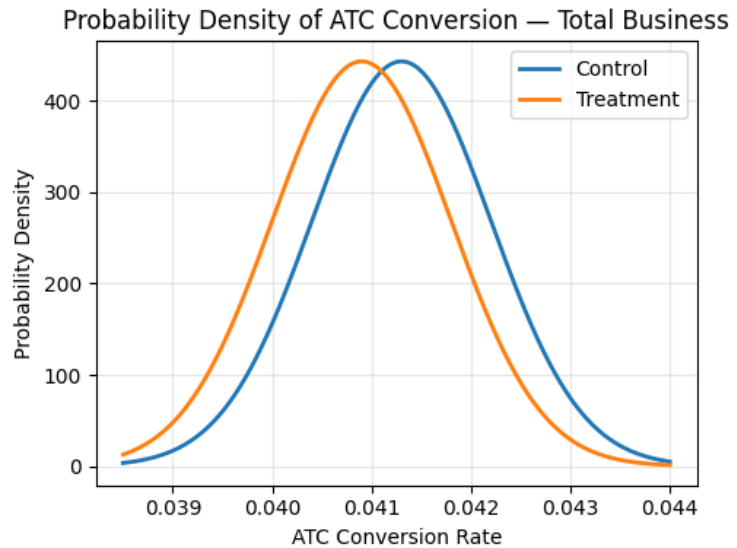
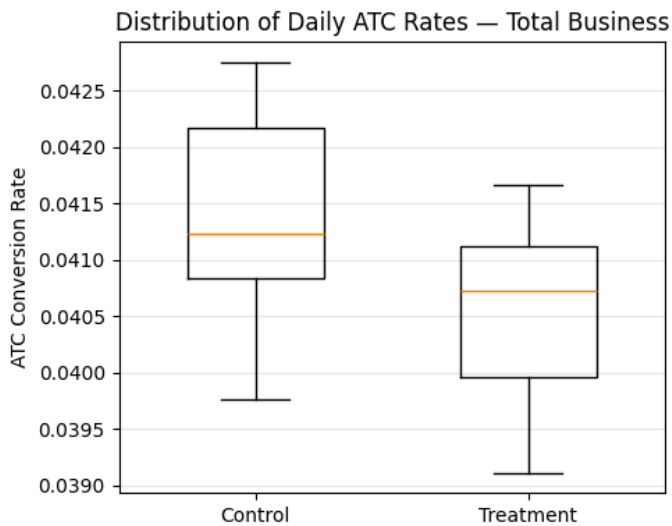
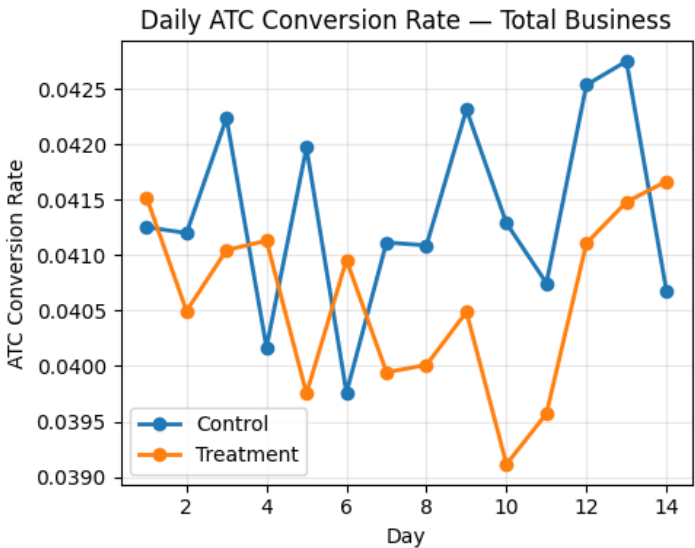


# Sticky Add-to-Cart on PDP – Test Design & Experiment Setup

Dimension		Description
Experiment Type		Randomized A/B test (Control vs Treatment)
Statistical Test		Two-proportion z-test
Variants	Control ( C )	ATC visible on page load but scrolls out of view
	Treatment ( T1 )	Sticky ATC CTA while scrolling
Primary Metric		Add-to-Cart Conversion Rate
Randomization Unit		Session-level
Traffic Split		50% Control / 50% Treatment
Test URL		<a href="http://www.thecompany.com/stainless_steel_pot/SKU-123.com">www.thecompany.com/stainless_steel_pot/SKU-123.com</a>
Test Duration		14 days

# Sticky Add-to-Cart on PDP – Results

Variation	Visits	ATC Clicks	ATC rate	Improvement	Confidence Interval	p-value
Control	32,812	1,354	4.13%	Baseline	Baseline	Baseline
Treatment 1	31,575	1,252	3.97%	<b>-0.16 pp</b>	$[-0.34\text{pp}, +0.02\text{pp}]$	0.07
<b>Total</b>	<b>64,387</b>	<b>2,606</b>	<b>4.05%</b>			



While not statistically significant, Sticky ATC directionally underperformed Control

# Sticky Add-to-Cart on PDP – Results

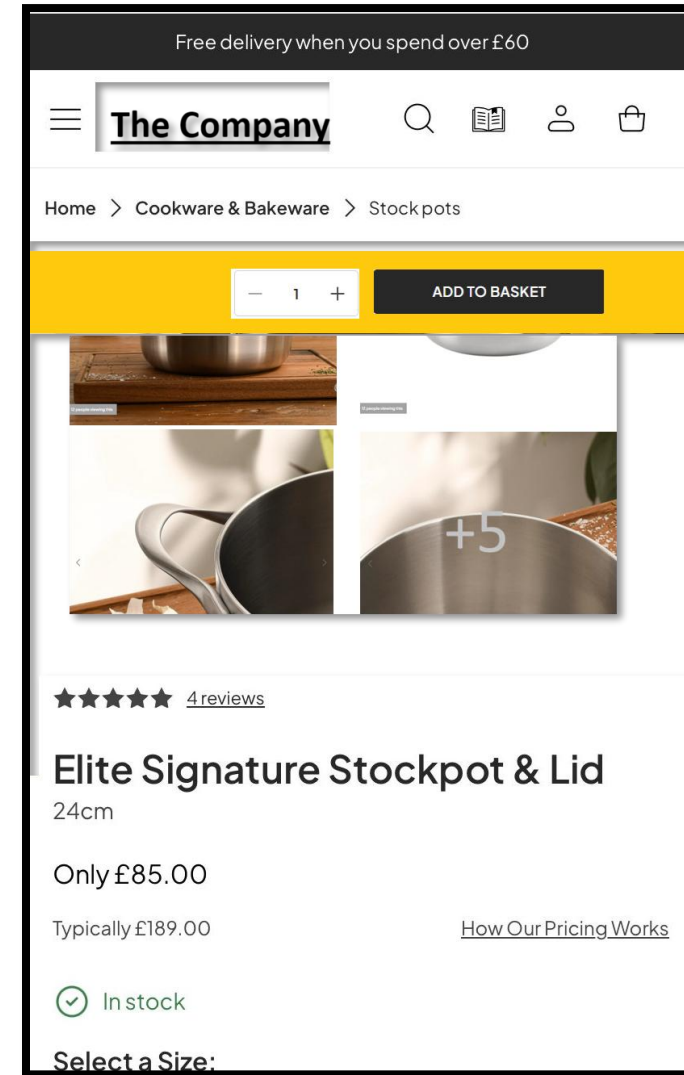
Device	Variation	Visits	ATC Clicks	ATC Rate	Improvement	Confidence Interval	p-value
Mobile	Control	22,968	953	4.15%	Baseline	Baseline	Baseline
Mobile	Treatment 1	22,102	849	3.84%	<b>-0.31 pp</b>	[-0.55pp, -0.07pp]	0.01
<b>Mobile Total</b>		<b>45,070</b>	<b>1,802</b>	<b>4.00%</b>			

Device	Variation	Visits	ATC Clicks	ATC Rate	Improvement	Confidence Interval	p-value
Desktop	Control	9,844	401	4.07%	Baseline	Baseline	Baseline
Desktop	Treatment 1	9,473	403	4.27%	<b>+0.20 pp</b>	[-0.35pp, +0.75pp]	0.31
<b>Desktop Total</b>		<b>19,317</b>	<b>804</b>	<b>4.16%</b>			

Sticky ATC delivered a small, non-significant uplift on Desktop but caused a statistically significant decline on mobile

# Sticky Add-to-Cart on PDP – Conclusions

- While desktop users showed a small directional uplift, mobile users, who represent ~60% of traffic, experienced a significant decline in add-to-cart rate
- On Mobile, users seem to value a clean, unobstructed PDP view. The persistent ATC reduced visual clarity and was likely perceived as intrusive or distracting
- It is not recommended to roll out Sticky ATC globally. Prioritize mobile-first PDP clarity and explore alternative friction-reduction patterns that preserve content visibility.



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# Photo Grid improvement on PDP

# **Photo Grid improvement on PDP - Problem statement**

## **Business context**

- PDP photo grid is one of the primary ways users evaluate quality, usage, and fit.
- Low ATC rates suggest users may still lack clarity or confidence, highlighting an opportunity to strengthen product storytelling through imagery.

## **Leadership question**

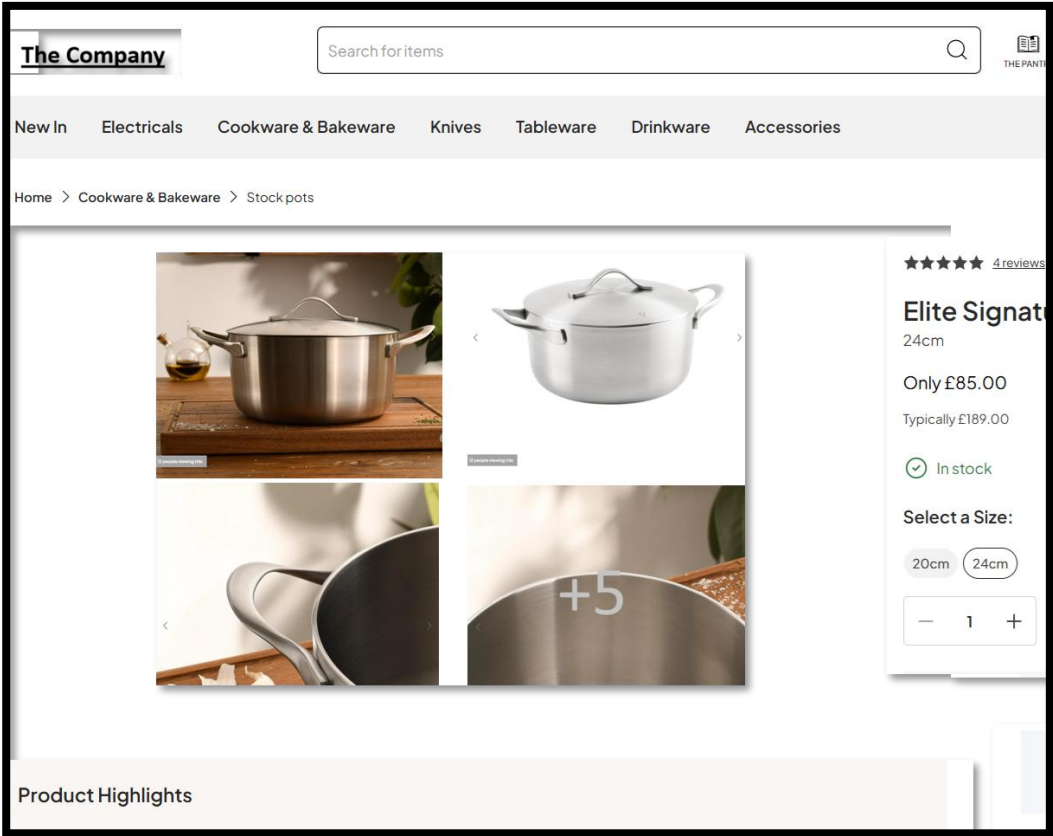
- Can improving the PDP photo grid increase add-to-cart conversion by improving product understanding and customer confidence?

## **Decisions to be made**

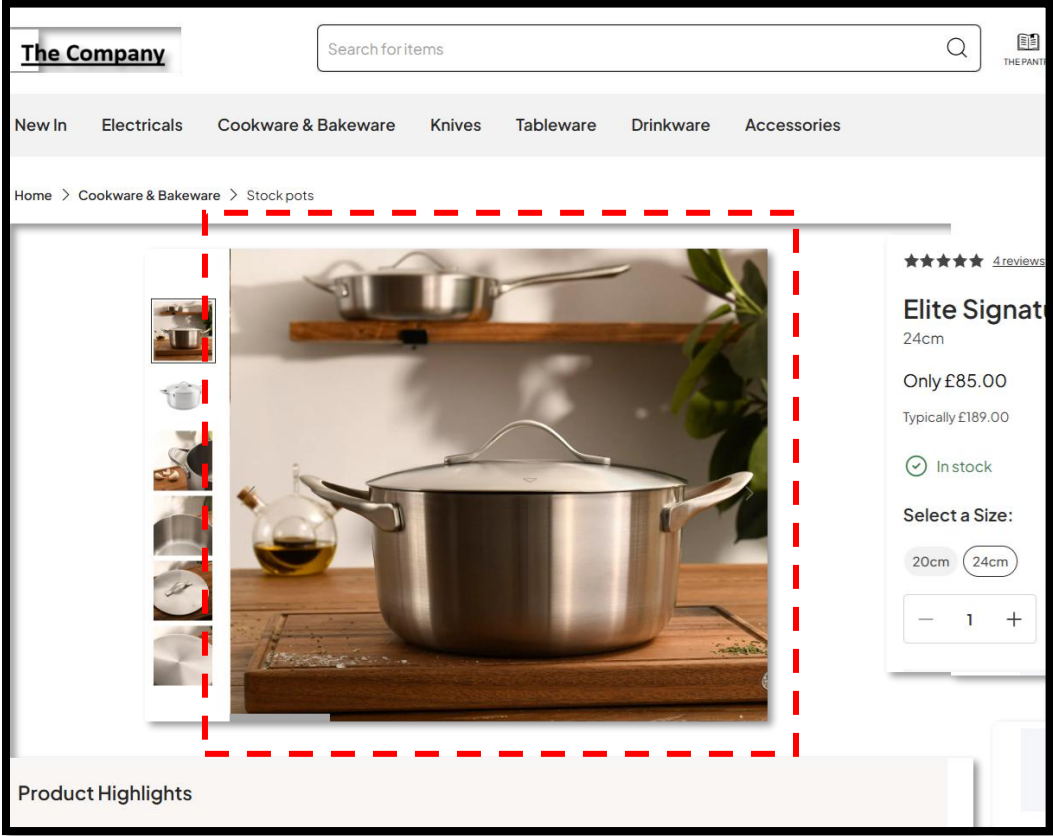
- Should the layout of the PDP photo grid be changed?
- Should specialty videos be added to the PDP photo grid?

# Photo Grid improvement on PDP – Layout

## Current Layout

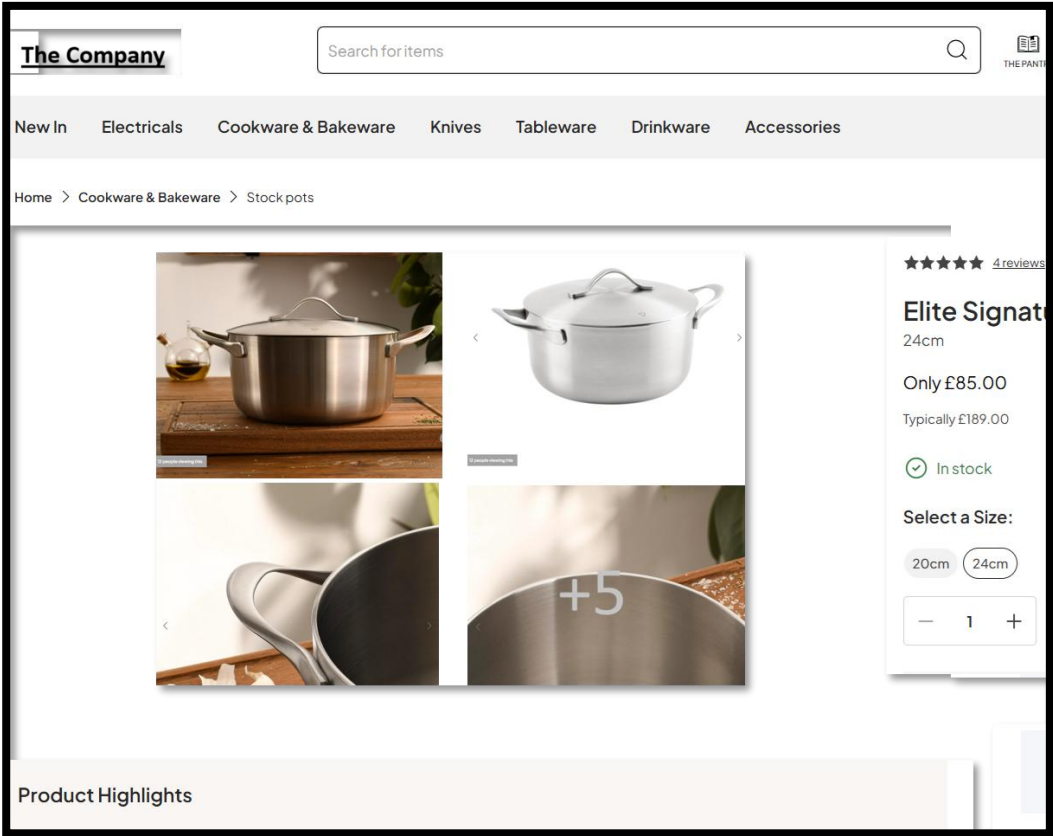


## Option A: Hero-first Photo Grid

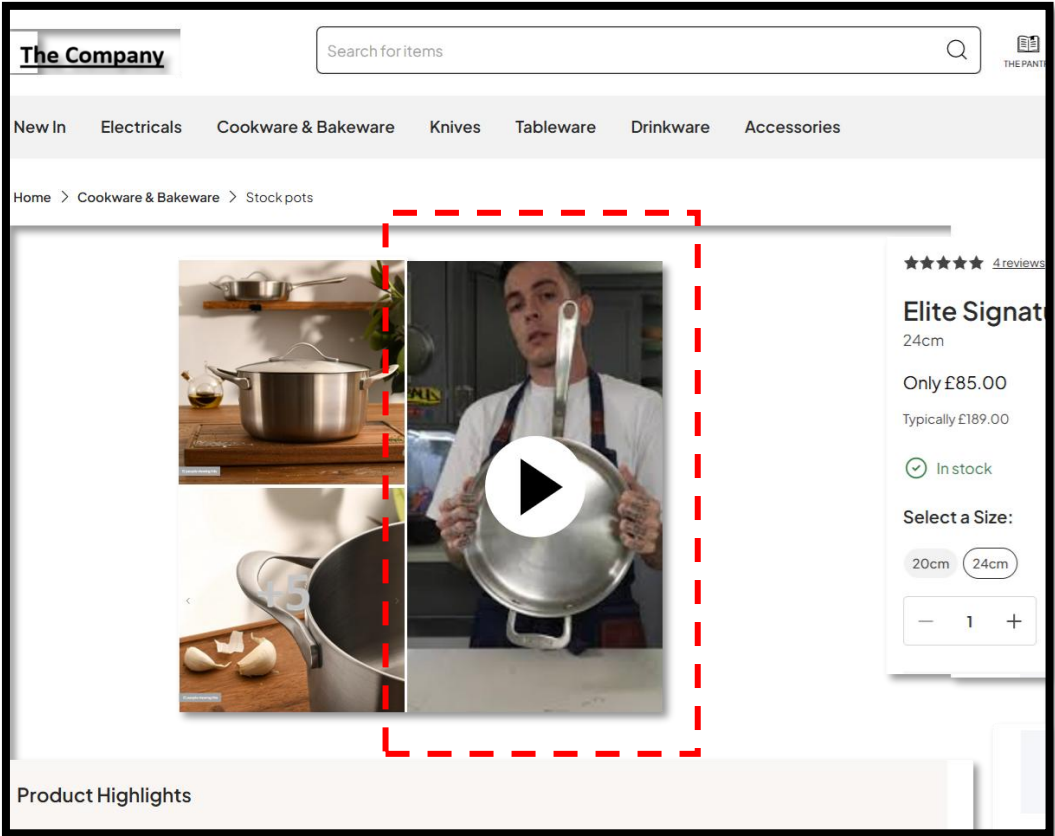


# Photo Grid improvement on PDP – Layout

## Current Layout



## Option B: Video-enhanced Photo Grid





# **Photo Grid improvement on PDP – Hypothesis & Success metrics**

## **Hypothesis**

Improving the PDP photo grid by enhancing visual hierarchy and incorporating rich media will increase add-to-cart conversion by improving product understanding and customer confidence

### **Key metric**

- PDP visit to ATC conversion

### **Secondary metrics**

- PDP ATC to Order conversion
- PDP Photo Grid Click rate
- PDP Page Load time

# Photo Grid improvement on PDP – Test Design & Experiment Setup

Dimension		Description
Experiment Type		Randomized A/B/n test (3-arm): 1 Control + 2 Treatment variants
Statistical Test		Chi-square test to verify difference among Variants Pairwise two-proportion z-tests vs Control
Variants	Control ( C )	Current Photo Grid
	Treatment 1 ( T1 )	Hero-first Photo Grid
	Treatment 2 ( T2 )	Video-enhanced Photo Grid
Primary Metric		Add-to-Cart Conversion Rate
Randomization Unit		Session-level
Traffic Split		Even split (33.33% each)
Test URL		<a href="http://www.thecompany.com/stainless_steel_pot/SKU-123.com">www.thecompany.com/stainless_steel_pot/SKU-123.com</a>
Test Duration		14 days

# Photo Grid improvement on PDP – Results

Variation	Visits	ATC Clicks	ATC rate	Improvement	Confidence Interval	p-value
Control (C)	18,200	728	4.00%	Baseline	Baseline	Baseline
Hero-first (T1)	18,050	836	4.63%	<b>+0.63 pp</b>	[+0.28pp, +0.98pp]	0.002
Video (T2)	18,120	765	4.22%	<b>+0.22 pp</b>	[-0.12pp, +0.56pp]	0.18
<b>Total</b>	<b>54,370</b>	<b>2,329</b>	<b>4.28%</b>			

- Hero-first Photo Grid shows a strong and significant lift in the add-to-cart conversion
- Video-enhanced Photo Grid presents a non-statistically significant improvement on add-to-cart

# Photo Grid improvement on PDP – Economic Impact

Metric	Baseline	Video-Enhanced
Monthly PDP visits	300,000	300,000
Number of PDPs	20,000	20,000
ATC rate	4.00%	4.22%
<b>Add-to-Carts</b>	<b>12,000</b>	<b>12,660</b>
ATC → Order conversion	20%	20%
Orders	2,400	2,532
<b>Incremental orders</b>	<b>—</b>	<b>132</b>
Avg. Margin per order	\$40	\$40
Monthly margin	\$96,000	\$101,280
Incremental monthly margin	—	\$5,280
Video production cost per PDP	—	\$250
ROI assessment	—	Not economically viable at scale
Max Video rollout	—	20 PDPs

Video-enhanced Photo Grid is not Economically viable at scale

# Photo Grid improvement on PDP – Conclusions

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- Prioritizing the Hero image at first view led to a meaningful lift in add-to-cart, suggesting shoppers benefit from immediate product clarity before engaging with additional content
- While Video-enhanced Photo Grid drove a modest directional lift in add-to-cart, the impact was not significant, suggesting video adds value for some shoppers only
- The Video variant created incremental value, but not enough to justify scaling across all PDPs. Based on the observed lift, we can produce 20 videos per month and remain ROI-neutral

# Next Steps

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- Explore alternative sticky ATC layouts that maintain visibility without crowding key content
- Explore additional PDP optimizations like:
  - PWA-friendly environments,
  - Enhanced image resolution,
  - or AI-generated visuals for SKUs with limited photography
- Test with placing ATC options in sections like “You May Also Like,” “Recently Viewed,” aiming to capture intent at different scroll depths and decision moments

# **Thank You!**