Sequenceof events for a shopper hiring process

Question: What if initiating background check earlier?

apply

mail card

activate card

initiate background check

complete background check

take orientation

complete first batch

Attribution window

application window

a/b test window
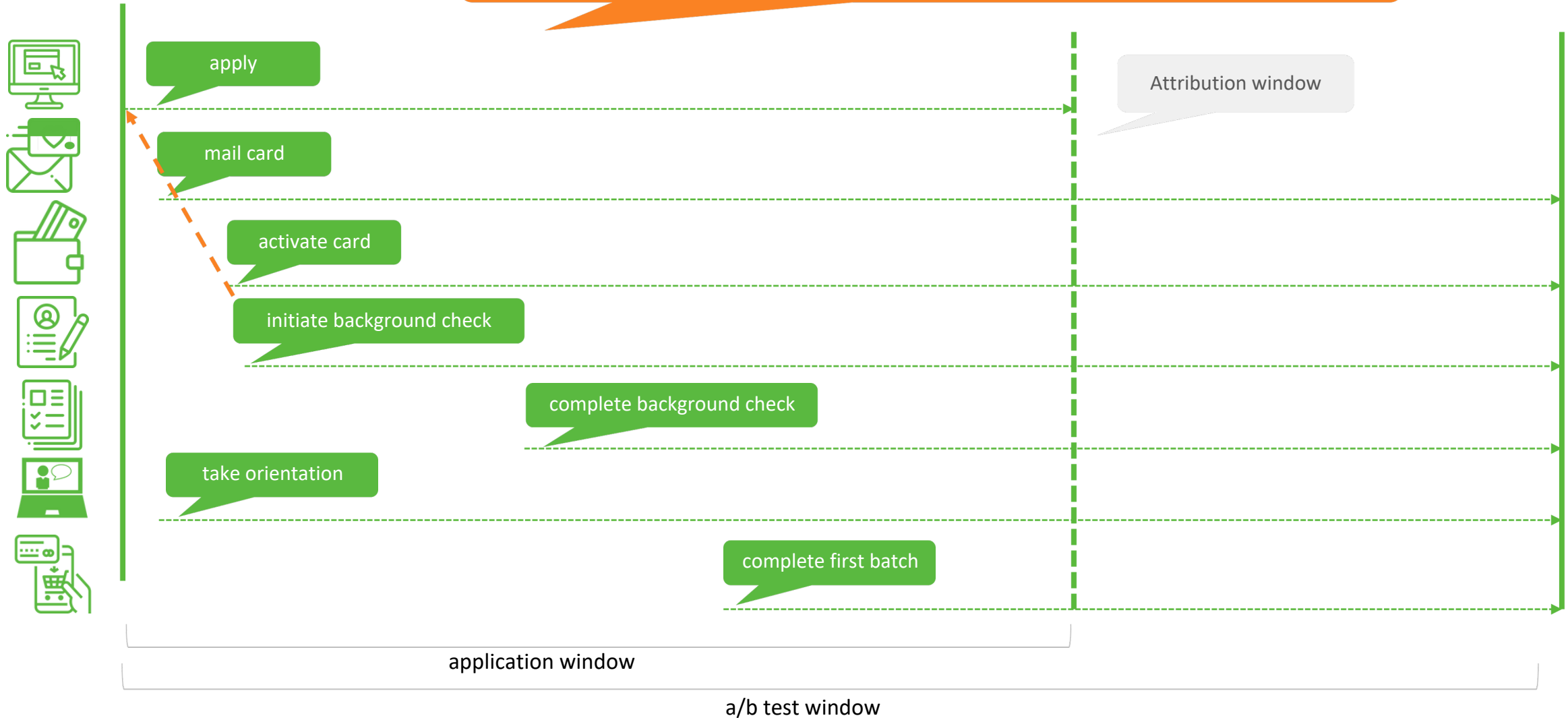
Q1: Evaluate A/B testresult

If initiating background check earlier…
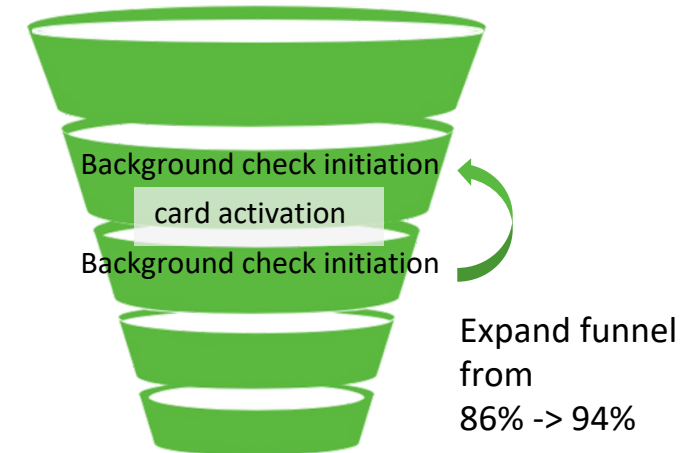❶ Increases first batch completion rate
❷ Reducesthe entire hiring process time (processes optimization)
❸ Evidence does not show shoppers will start quickly if they complete card activation and background check (we can not includethe duration of

group	#applicant (sample size)	#completed first batch	❶ conversion rate	❷ #days from application to first batch completion	❸ #days from both completion (card activation, background check) to first batch completion
control	10,024	2,678	26.7%	10.2 days	1.95 days
treatment	4,958	2,115	**42.7%**	**7.1 days**	2.00 days
conclusion			conversion rate significantly increased (z score 19.2; significant at 90%)	accelerated the hiring process significantly	stimulate shopper to start more quickly insignificantly

improve   *improve*

* Appendix: z test and sample size

Q2: Is this change cost-effective?

- We are using **card activation rate**, **and the average of first batch completion cost** to evaluate cost-effective Because the card activation event is the most close to the initialing background event in the hiring funnel, and the average cost per first batch completion is the most effective metric to evaluate dollar efficiency.
- We would like to check whether the activation funnel will be expanding, if initiating background check earlier.
- Orientation event is one of the factors might impact the conversion rate, so using bottom of funnel to evaluate is not an ideal metric.
- A qualified potential shopper in hiring process must both activate card and pass background check, then enable them to become a "successful" shopper, so we would like to focus on card activation rate and dollar efficiency at the same time.

group	overall	job site search	shopper referral bonus	social media	web search engine	Dollar efficiency
			card activation rate			
control	**86%**	67%	96%	96%	83%	**$96**
treatment	**94%**	87%	97%	98%	94%	**$70**
z score At 90%	**17.1 significant**	12.35 significant	0.54 insignificant	3.4 significant	13.3 significant	

Yes cost effective

Yes cost effective

Background check initiation

card activation

Background check initiation

Expand funnel from 86% -> 94%

Q3: Observation

job site search channel:
- **lowest conversion** rate in the control group
- **conversion rate significantly improved**, if initiating background check
- **orientation completion rate is the lowes**t in the test

social media channel:
- generates **ineffective leads** in the test
- **conversion rate insignificantly improved**, if initiating background check
- **lowest orientation completion rate**

shopper referral bonus channel:
- **highest conversion rate** in the control group;
- generates **effective leads**
- **highest orientation rate**

web search engine channel:
- **lowest conversion rate** in the control group;
- **conversion rate significantly improved**, if initiating background check

Control

	conversion rate	card activation rate	orientation rate	background check completed rate	#days from application to first batch completion	#days from both completion (card activation, background check)
job site search	16%	67%	69%	100%	9.5	2.1
shopper-referral-bonus	34%	96%	82%	99%	9.5	1.8
social-media	17%	96%	24%	98%	11.3	2.0
web-search-engine	25%	83%	65%	99%	9.6	1.9
Overall	**27%**	**86%**	**47%**	**100%**	10.2	2.0

Treatment

	conversion rate	card activation rate	orientation rate	background check completed rate	#days from application to first batch completion	#days from both completion (card activation, background check)
job site search	38%	87%	58%	100%	6.3	1.9
shopper-referral-bonus	50%	97%	83%	100%	6.9	2.1
social-media	20%	98%	20%	100%	8.0	2.0
web-search-engine	45%	94%	54%	100%	6.8	2.0
Overall	**43%**	**94%**	**58%**	**100%**	7.1	2.0

Q3: Recommendation

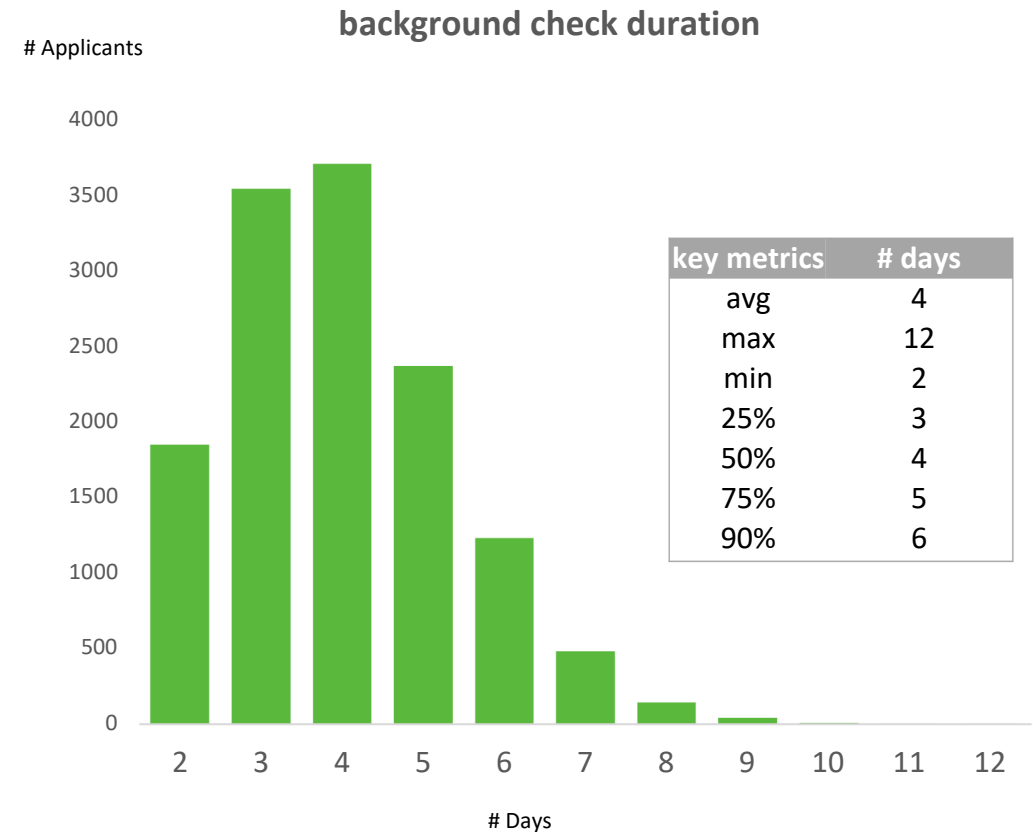❶ To perform A/B Test to evaluate if **mandatory orientation**would improve the conversion rate

(control group)	successful hiring	Not successful hiring
orientation completed	**47%**	**42%**
no orientation	53%	58%
	100%	100%

❸ The conversion rate in social media channel is much lower than average

If this channel is paid advertising, we should evaluate the ROI, which cost is channel acquisition cost + $30 background fee, etc. to check ifthesocial media channel isan effective way to attract potential shoppers

group	social media conversion rate	overall
control	**17%**	27%
treatment	**20%**	43%

* Due to the sample size, this analysis does not break down into the city level

❷ To perform A/B Test to evaluate if **accelerate the duration of background check** would make shopper start to shop quickly

background check duration

Applicants

key metrics	# days
avg	4
max	12
min	2
25%	3
50%	4
75%	5
90%	6

Days