Data Analysis

Resolution on shopper hiring problem

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Sequence of the shopper hiring process

Apply

Mail card

Activate card

Check background

Complete background

Complete orientation (optional)

Complete first batch
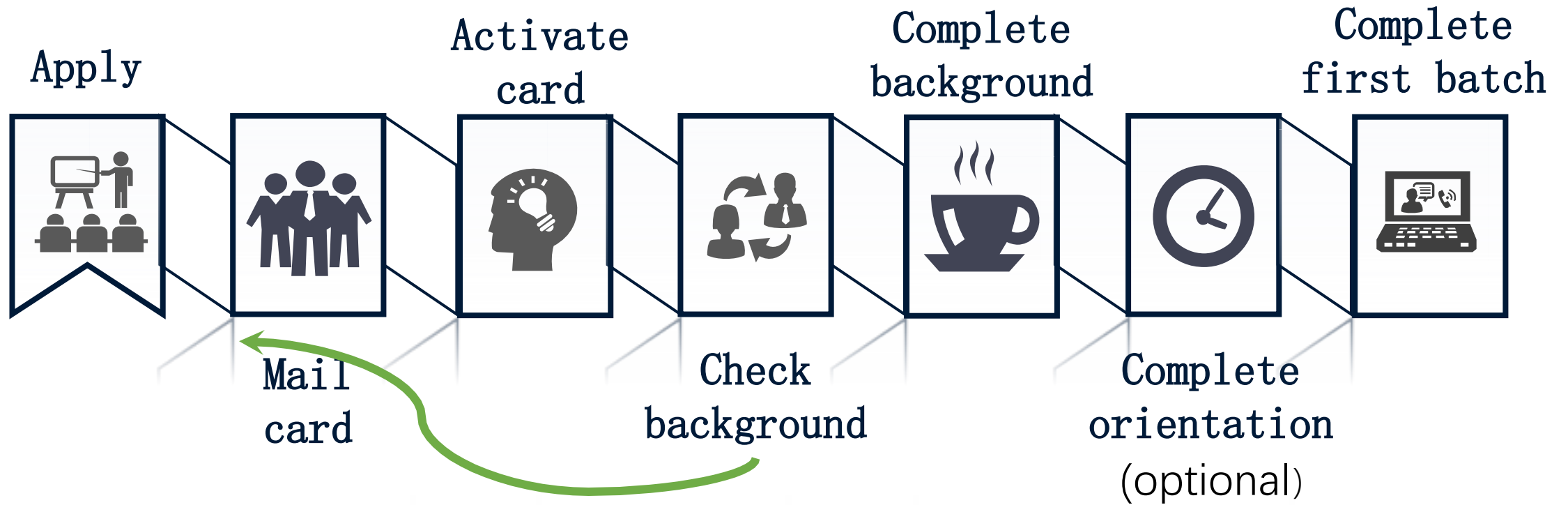
What will happen if background-check is initiated earlier?

Data processing

The average number of days for the control group members to complete the entire process was 10.2 days. It is unknown whether the interviewees joining from 11.1 to 11.11 have completed the entire process. Therefore, in order to ensure the completeness of the data duration, it is necessary to exclude interviewees who participated after November 1st from the data. The average number of days for members of the treatment group to complete the entire process is 7.1 days, requiring data processing similar to that of the control group. The processing results are as follows:

Group	Applicant	Completed first batch
Control	10,024	1,654
Treatment	4,958	1,534

Q1 A/B test result

Conclusion: The earlier background check could significantly increase first batch completion conversion rate.

Group	Applicant	Completed first batch	Conversion rate(completed first batch/applicant)
Control	10,024	1,654	16.50%
Treatment	4,958	1,534	30.93%
Confidence			Z score is 19.15 with a significant at 90%. (Reject Ho, Accept H1, Launch Feature)

Q2 Is this change cost-effective?

Cost per completed first batch in treatment group declines by 46.67% ((181.81-96.96)/181.81).

Group	Applicant	Cost of background	Completed first batch	Cost per Acquisition(applicant*30/completed first batch)
Control	10,024	30	1,654	181.81
Treatment	4,958	30	1,534	96.96

Q3 Other observations and recommendations

1. The conversion rate of the two main recruitment channels has remarkably increased after the background check is advanced. Earlier background check results in more optimized interview processes, shorter waiting times for interviewees, stronger work willingness, and higher success rates. So the company can consider further improving the speed of background check, but pay attention to controlling costs and measuring cost-effectiveness.

Control group	Applicant	Completed first batch	Conversion
Job-search-site	1,765	191	10.8%
Web-search-engine	3,929	704	18%
Social-media	2,998	621	20%
Shopper-referral-bonus	1,332	138	10.3%
Treatment group	Applicant	Completed first batch	Conversion
Job-search-site	860	264	31%
Web-search-engine	2,010	695	35%
Social-media	1,429	405	28%
Shopper-referral-bonus	659	170	26%

Q3 Other observations and recommendations

2. Whether orientation, an optional process is completed has a certain correlation with the conversion rate of the completed first batch. An A/B test should be performed.

Control group	Successful hiring	Not successful hiring
Orientation completed	47%	42%
No orientation	53%	58%
	100%	100%

Thanks for your advice.