



## Additional Analysis of Transition to Success Program Evaluation Final Report

Department of Youth Justice  
February 2019

# Executive summary



# Executive summary

The additional analysis of the Transition to Success (T2S) program aims to understand whether the results from the previous analysis hold over a longer 12 month reporting period (as opposed to 6 months). The results highlight that the outcomes moderate slightly, but broadly hold over a 12 month reporting period for the offence analysis and cost benefit analysis.

## Offence analysis

The offending outcomes for total T2S population with Youth Justice history who completed a course (treatment cohort) *relative* to the comparator cohort highlights that the updated **results are sustained over the 12 month period**, albeit moderating slightly.

	Total T2S population with Youth Justice history who completed a course	Comparator cohort
<b>Reoffending rate</b>		
Previous analysis (6 month)	43% (n = 88)	59% (n = 87)
Updated analysis (12 month)	58% (n = 53)	73% (n = 70)
<b>Change in average custody nights (per month)</b>		
Previous analysis (6 month)	2.2 to 0.5	2.2 to 3.0
Updated analysis (12 month)	1.8 to 1.1	1.9 to 3.6
<b>Change in average supervision days (per month)</b>		
Previous analysis (6 month)	13.6 to 13.2	7.8 to 11.6
Updated analysis (12 month)	12.9 to 11.5	9.2 to 11.1

## Cost benefit analysis

The results of the updated cost benefit analysis are slightly lower considering the outcomes over the longer time period, but still broadly in line with the previous cost benefit analysis.

The T2S Program has a net present value (NPV) of \$11.2 million (using a 7% real discount rate) and a benefit cost ratio (BCR) of 2.13. In other words, **every \$1 spent on the program results in \$2.13 of benefits**. The benefits/avoided costs are driven by the reduction in offending outcomes in the treatment group relative to the comparator cohort.

	Net present value (\$m, 2016-17)	
	Previous analysis	Updated analysis
<b>Costs</b>	<b>\$10.0m</b>	<b>\$10.0m</b>
Operational costs	\$10.0m	\$10.0m
<b>Benefits</b>	<b>\$25.6m</b>	<b>\$21.2m</b>
Avoided costs of custody nights	\$18.3m	\$14.3m
Avoided costs of supervision days	\$5.1m	\$6.6m
Avoided costs of crime	\$2.2m	\$0.3m
<b>Net present value</b>	<b>\$15.6m</b>	<b>\$11.2m</b>
<b>Benefit cost ratio</b>	<b>2.57</b>	<b>2.13</b>

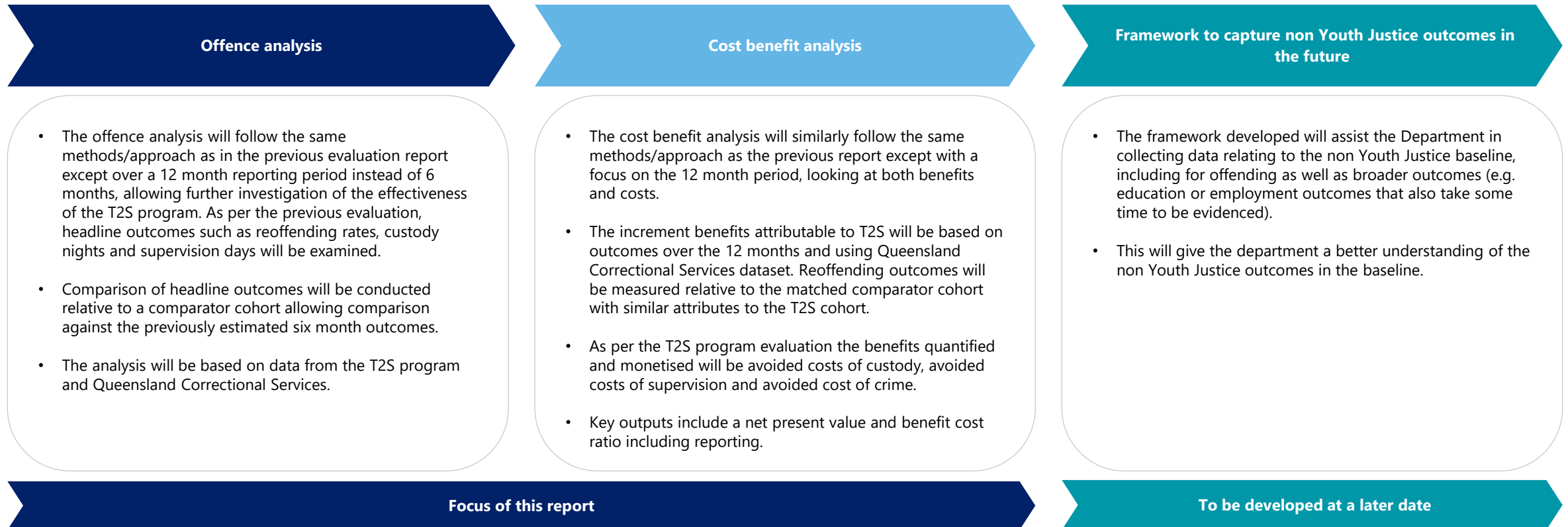
# Background



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Deloitte Access Economics was engaged to undertake additional analysis on the outcome evaluation of the Transition to Success (T2S) program.

This report provides additional analysis of the T2S program and is supplementary to the final evaluation report delivered in September 2018. This report covers the updated offence analysis and cost benefit analysis, which aims to understand whether the results from the previous analysis hold over a longer 12 month reporting period (as opposed to 6 months). The framework to capture non Youth Justice outcomes in the future is currently being developed in collaboration with the Department and will be delivered at a later date.



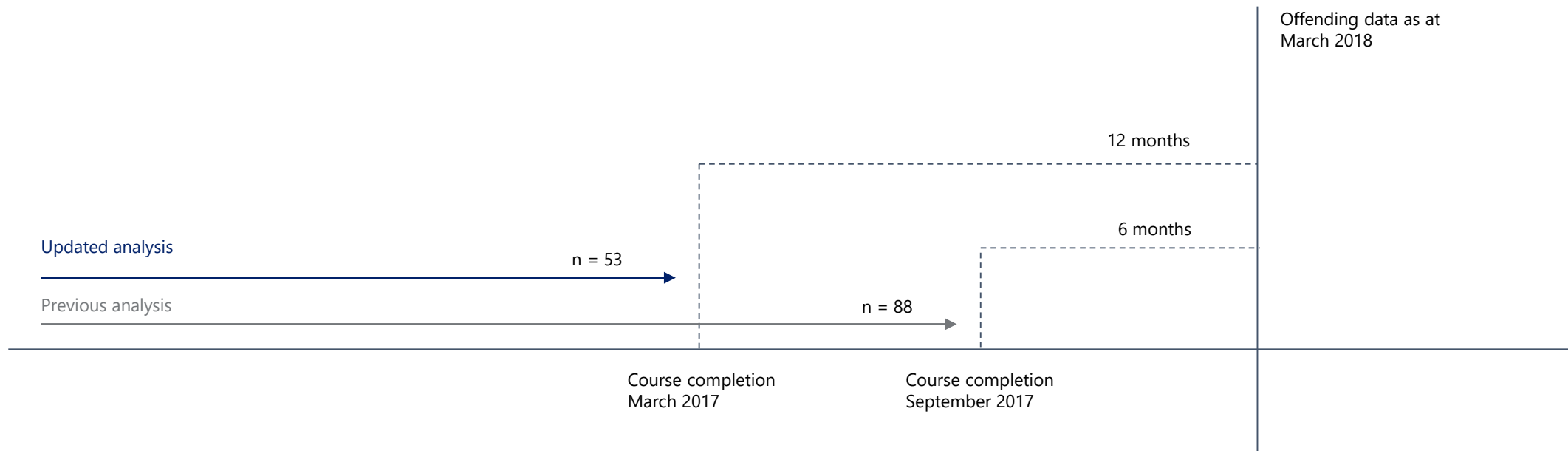
# Offence analysis



# Offence analysis

The offence analysis considers the outcomes over a 12 month reporting period, which results in a relatively smaller sample size.

The updated offence analysis uses the same data that was provided by the Department for the previous analysis. However, the additional offence analysis considers offending outcomes over a 12 month reporting period, rather than 6 months as in the previous analysis. Specifically, this analysis considers offending outcomes for those participants who completed their last course up to March 2017 (rather than September 2017), resulting in a relatively smaller sample size of 53, as illustrated below. This same approach was followed for the other cohorts.



# Offence analysis

The updated analysis highlights some slight differences between the 6 month and 12 month outcomes, including the reoffending rate, custody nights and supervision days.

	[1] Total T2S population who completed a course	[2] Total T2S population with Youth Justice history who completed a course	[3] Comparator cohort	[2]-[3]
<b>Reoffending rate</b>				
Previous analysis (6 month)	25% (n = 151)	43% (n = 88)	59% (n = 87)	-15%
Updated analysis (12 month)	33% (n = 99)	58% (n = 53)	73% (n = 70)	-14%
<b>Change in average custody nights (per month)</b>				
Previous analysis (6 month)	1.3 to 0.3	2.2 to 0.5	2.2 to 3.0	-
Updated analysis (12 month)	0.9 to 0.6	1.8 to 1.1	1.9 to 3.6	-
<b>Change in average supervision days (per month)</b>				
Previous analysis (6 month)	7.9 to 6.9	13.6 to 13.2	7.8 to 11.6	-
Updated analysis (12 month)	6.9 to 6.2	12.9 to 11.5	9.2 to 11.1	-

Note: Figures may not sum due to rounding.



# Cost benefit analysis



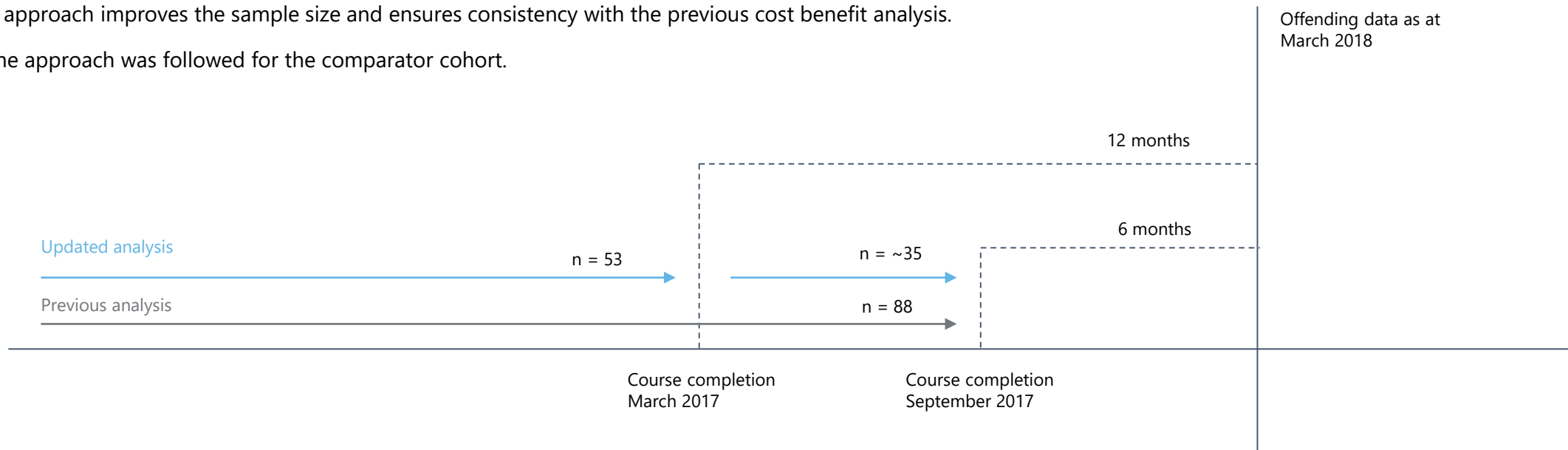
# Cost benefit analysis

The cost benefit analysis considers the outcomes over a 12 month reporting period, as well as the 6 month outcomes for those participants who completed a course between March and September 2017.

The updated cost benefit analysis considers the outcomes over a 12 month reporting period, as well as the 6 month outcomes for those participants who completed a course between March and September 2017. The reason for this is twofold:

1. This approach aligns the benefits (or avoided costs) of the program with the costs from the previous analysis. It was also discussed with the Department that the costs could not be reliably adjusted as the program includes costs that could not simply be scaled down in line with changes in the size of the cohort due to the 'fixed' nature of the costs. For example, the central administration costs do not move exactly in line with changes in the cohort size.
2. This approach improves the sample size and ensures consistency with the previous cost benefit analysis.

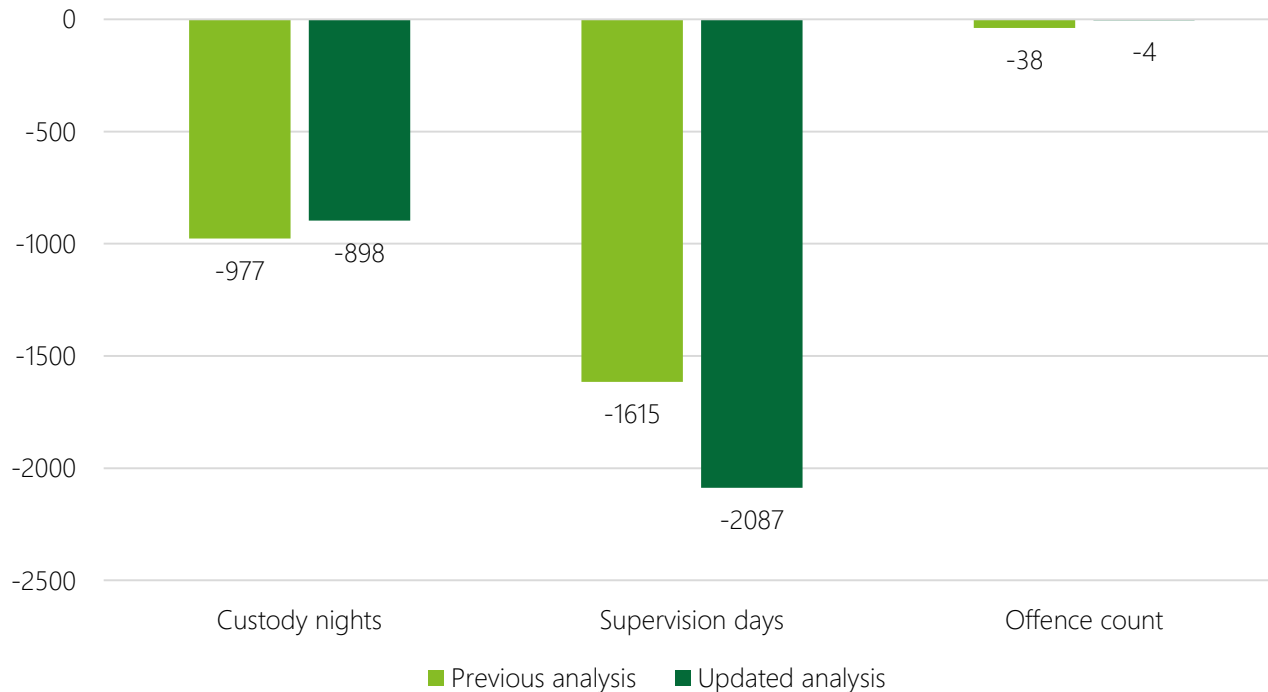
This same approach was followed for the comparator cohort.



# Cost benefit analysis

The annual change in custody nights, supervision days and offence count vary slightly in the updated cost benefit analysis.

Annual change in custody nights, supervision days and offence count (treatment relative to comparator)



		Value
Detention night (detention based supervision)	Per person per night	\$1,492
Prison night	Per person per night	\$294
Community-based supervision for young people	Per person per day	\$163
Weighted average cost of crime	Per incident	\$3,054

Sources: T2S program data, Total T2S population with Youth Justice history who completed a course; T2S comparator data; PC RoGS, 2018; AIC, 2011; Deloitte Access Economics calculations.

# Cost benefit analysis

The annual change in custody nights, supervision days and offence count drive the change in the updated cost benefit analysis.

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The annual change in custody nights, supervision days and offence count drive the change in the updated cost benefit analysis:

- The change in the **avoided cost of custody** is driven by the change in detention nights and prison nights. While the change in custody nights at the aggregate level is relatively constant, compared to the previous analysis, the number of detention nights increases while the number of prison nights decreases. As the cost of detention nights is relatively higher than prison nights, the movement in the detention nights results in a decrease in the avoided cost of custody overall.
- The change in the **avoided cost of supervision** is driven by the change in supervision days for youth justice and adults. In the updated analysis, there are stronger outcomes for both youth justice and adults, leading to higher avoided costs of supervision compared to the previous analysis (largely driven by the improvement in the additional cohort). As it is assumed that the cost of supervision is uniform for both youth justice and adults, the change in the aggregate figure drives the avoided costs of supervision.
- The change in the **avoided cost of crime** is driven by the change in the offence count, which does not decrease by as much compared to the previous analysis. While there is some level of moderation, the impacts are still favourable. As in the previous analysis, the average weighted cost of crime was calculated based on the composition of pre offending outcomes of the T2S cohort.

While the analysis attempts to quantify and monetise all key benefits, sometimes this is not feasible given data or other constraints (such as difficulty with attribution). Benefits that were not directly quantified include the benefit to individuals participating in the program in terms of improved education and/or employment outcomes. It should also be noted that as the offending outcomes, which are used to derive the avoided costs/benefits, relate only to young people with Youth Justice history, the benefits presented in this analysis are conservative. As in the previous report, a sensitivity analysis was conducted around the proportion of Youth Justice (see Appendix A).

The next stage of this engagement includes the framework to capture non Youth Justice outcomes in the future, as well as broader outcomes (such as education or employment), which is currently being developed in collaboration with the department and will be delivered at a later date.

# Cost benefit analysis

The T2S Program has a net present value (NPV) of \$11.2 million (using a 7% real discount rate) and a benefit cost ratio (BCR) of 2.13. In other words, every \$1 spent on the program results in \$2.13 of benefits.

## Cost benefit analysis results

	Net present value (\$m, 2016-17)	
	Previous analysis	Updated analysis
<b>Costs</b>	<b>\$10.0m</b>	<b>\$10.0m</b>
Operational costs	\$10.0m	\$10.0m
<b>Benefits</b>	<b>\$25.6m</b>	<b>\$21.2m</b>
Avoided costs of custody nights	\$18.3m	\$14.3m
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<b>Net present value</b>	<b>\$15.6m</b>	<b>\$11.2m</b>
<b>Benefit cost ratio</b>	<b>2.57</b>	<b>2.13</b>

Note: Figures may not sum due to rounding.

# Appendix A Sensitivity analysis



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In the case where the proportion of YJ increases from 70% to 100%, the NPV and BCR increase further, to \$20.3m and 3.04 respectively.

As discussed previously, as the treatment and comparator groups relate only to Youth Justice (YJ), so too the benefits monetised in the CBA. Based on all T2S participations over the 2.67 year period, YJ comprises approximately 70% of the T2S cohort. There are some broader benefits to non YJ that are not captured by this analysis, and therefore are conservative.

T2S have noted that they anticipate YJ will make up a larger share of the cohort in the future. Therefore, this sensitivity is interested in understanding how the benefits might change in line with the changing composition of YJ/non YJ. Specifically, we consider the sensitivity where YJ makes up 100% of the cohort and non YJ makes up 0% of the cohort.

The results indicate that, in the case where the proportion of YJ increases from 70% to 100%, the NPV and BCR increase further, to \$20.3m and 3.04 respectively. The fact that the CBA results included in the report do not include non YJ benefits means it is difficult to compare these results. The sensitivity has 0% non YJ participants, and therefore, all benefits are quantified in this case, whereas not all benefits are quantified in the central case. As a result, it is difficult to compare across these scenarios without knowing the value of non YJ benefits.

Sensitivity analysis on the YJ/non YJ composition of the T2S cohort

	Central: 70% YJ; 30% non YJ		Sensitivity: 100% YJ; 0% non YJ	
	Previous analysis	Updated analysis	Previous analysis	Updated analysis
Net present value	\$15.6m	\$11.2m	\$36.5m	\$20.3m
Benefit cost ratio	2.57	2.13	3.67	3.04



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