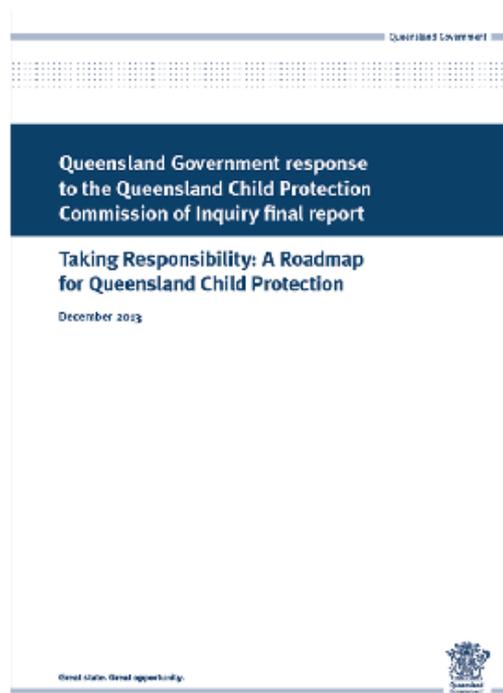




High complexity, 12 weeks work including User Acceptance Testing

Child Protection Simulation Analysis Model





Child Protection Simulation Model

- Carmody Report into child protection
- Government accepted all recommendations
- Department wished to test work package options
- ExtendSim model developed in 2014 allowed phasing of targeted work packages (WP) and testing impact of WP/s by region/s
- Key metrics were downstream counts, eg next 10-15 years
- Approximately 550K probability distributions (PD) determined child pathways by financial year, current age, indigenous status, region, initial/re-entry status and WP where active.



Child Protection Simulation Model

2014

- 7 regions
- 550K PD manually produced by Dept from raw Excel data
- Time-consuming for Dept staff when new FY data introduced
- automation in future would be better option for Dept

2019

- 5 regions
- 400K PD now automatically produced by model during initialisation from raw Excel data ('00s of '000s of records)
- Calculated by using import function and programming in ModL across system's 23 services



Child Protection Simulation Model

2021

- 6 regions
- 475K PD automatically produced by model during initialisation from raw Excel data ('00s of '000s of records)
- Calculated by using import function and programming in ModL across system's 23 services

Future: Next Steps

- TBA



Results / Report

- 74 key metrics per FY
- All analysis being conducted by Dept staff

```
61
62     if(strRegLU == strReg)
63     {
64         if(strIst == "Yes") // Initial
65         {
66             T_Region_pd = DBTableGetIndex(DB_CPSM, "S-CINOP PD - Initial Starting (" + strReg + ")");
67             // Now the indexes for the PD table
68             F_PD_fy = DBFieldGetIndex(DB_CPSM, T_Region_pd, "FY");
69             F_PD_age = DBFieldGetIndex(DB_CPSM, T_Region_pd, "age");
70             F_PD_ind = DBFieldGetIndex(DB_CPSM, T_Region_pd, "indig id");
71             F_PD_Path1 = DBFieldGetIndex(DB_CPSM, T_Region_pd, "path 1 count");
72             F_PD_Path2 = DBFieldGetIndex(DB_CPSM, T_Region_pd, "path 2 count");
73             F_PD_CountAll = DBFieldGetIndex(DB_CPSM, T_Region_pd, "total count");
74             recFYInAg = DBRecordFindMultipleFields(DB_CPSM, T_Region_pd, 1, F_PD_fy, strFY, 1, F_PD_age, int(rAge), 1, F_PD_ind, iPDInd, 1);
75
76
77             if(strSOD == "Substantiated - child in need of protection")
78             {
79                 // check the values for match & writes
80                 if(strPIT == "CPO" OR strPIT == "IPA & directive CPO") // S-CINOP to Living away from Home (Short)
81                 {
82                     pathCount = DBDataGetAsNumber(DB_CPSM, T_Region_pd, F_PD_Path1, recFYInAg);
83                     pathCount++;
84                     DBDataSetAsNumber(DB_CPSM, T_Region_pd, F_PD_Path1, recFYInAg, pathCount);
85                 }
86                 else if(strPIT == "IPA") // S-CINOP to Home (Short)
87                 {
88                     pathCount = DBDataGetAsNumber(DB_CPSM, T_Region_pd, F_PD_Path2, recFYInAg);
89                     pathCount++;
90                     DBDataSetAsNumber(DB_CPSM, T_Region_pd, F_PD_Path2, recFYInAg, pathCount);
91                 }
92                 else{} // NFA
93             }
94             else{} // no match on strSOD, NFA
95         }
96     }
97     else if(strIst == "No") // Reentry
98     {
99         T_Region_pd = DBTableGetIndex(DB_CPSM, "S-CINOP PD - Reentry Starting (" + strReg + ")");
100        // Now the indexes for the PD table
101        F_PD_fy = DBFieldGetIndex(DB_CPSM, T_Region_pd, "FY");
102        F_PD_age = DBFieldGetIndex(DB_CPSM, T_Region_pd, "age");
103        F_PD_ind = DBFieldGetIndex(DB_CPSM, T_Region_pd, "indig id");
104        F_PD_Path1 = DBFieldGetIndex(DB_CPSM, T_Region_pd, "path 1 count");
105        F_PD_Path2 = DBFieldGetIndex(DB_CPSM, T_Region_pd, "path 2 count");
106        F_PD_CountAll = DBFieldGetIndex(DB_CPSM, T_Region_pd, "total count");
```



So what?

- Model has been updated structurally 3 times since 2014 (7 regions to 5 then to 6) and has a large degree of automation
- All analysis is being conducted by Departmental staff
- Departmental analyst advised that updated model with automation is saving them significant time
- Testing and analysis by Dept now more effective & efficient



Andrew Shepherd*

A/Director, System Performance – Children

Performance Reporting and Analytics

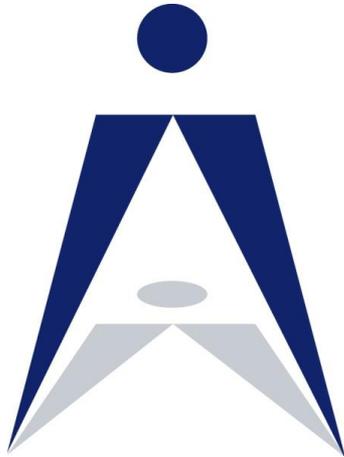
Department of Children, Youth Justice and Multicultural Affairs

T: 07 3097 6227

E: andrew.shepherd@cyjma.qld.gov.au



From Andrew: “I am happy to be your contact to take enquiries”.



InsightAcumen

Rob Brownie

Mobile: 0418 891 747

E-mail: rob@insightacumen.com.au

Website: www.insightacumen.com.au

Linked in  <http://au.linkedin.com/in/robertbrownie>