

Channel Shift – using data analysis to improve service delivery at the City of Edinburgh Council

CEC

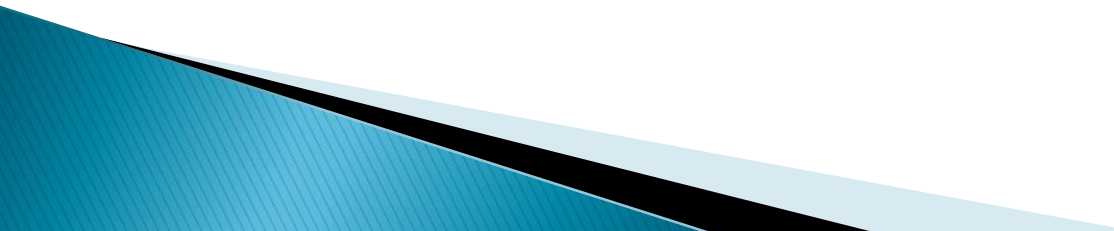
12.08.2015

Michal Wasilewski

I didn't do it...



Agenda

- ▶ Background
 - ▶ Design process (Double Diamond)
 - Discover
 - Define
 - Develop
 - Deliver
 - ▶ Conclusions
- 

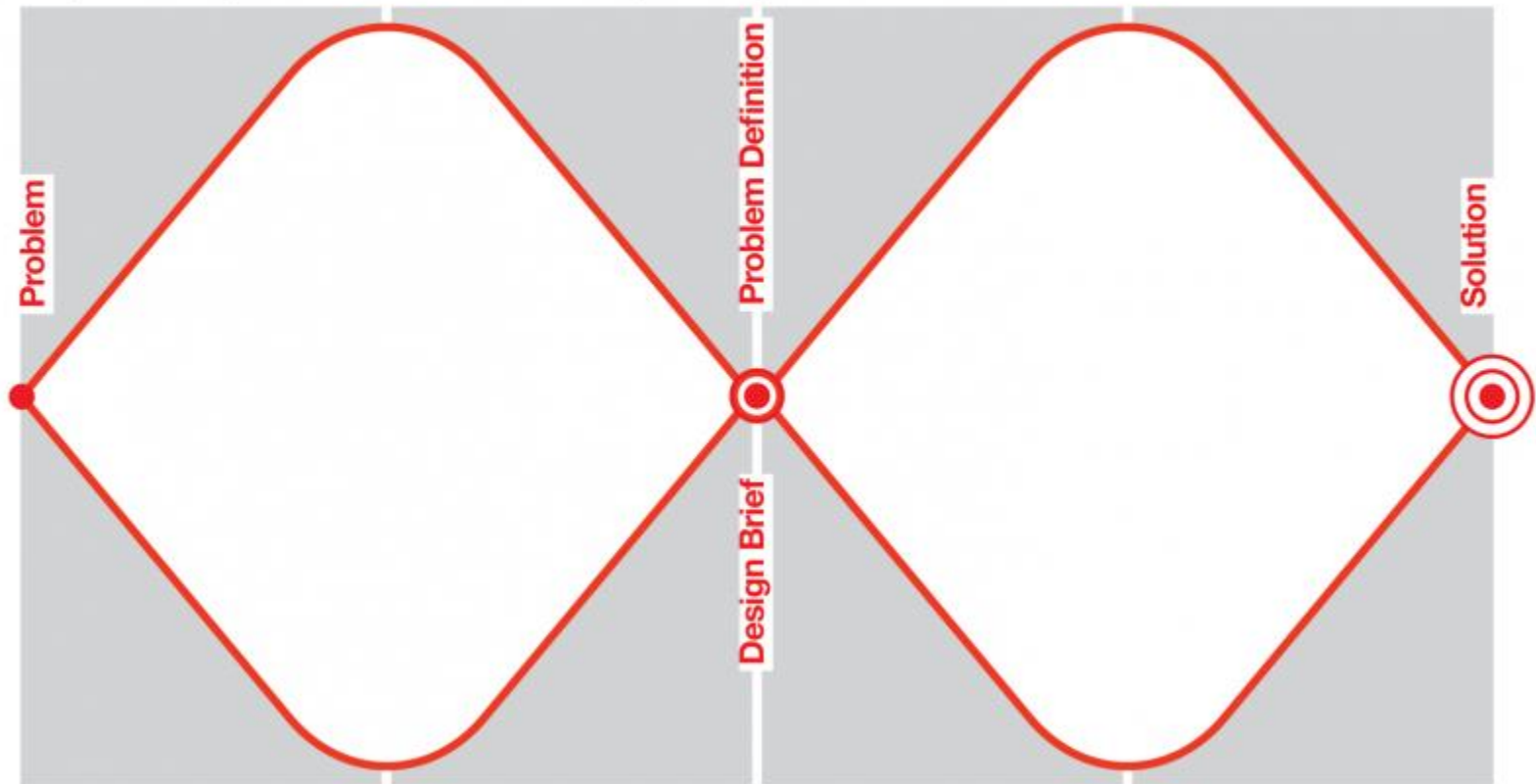
Double Diamond

Discover
insight into the problem

Define
the area to focus upon

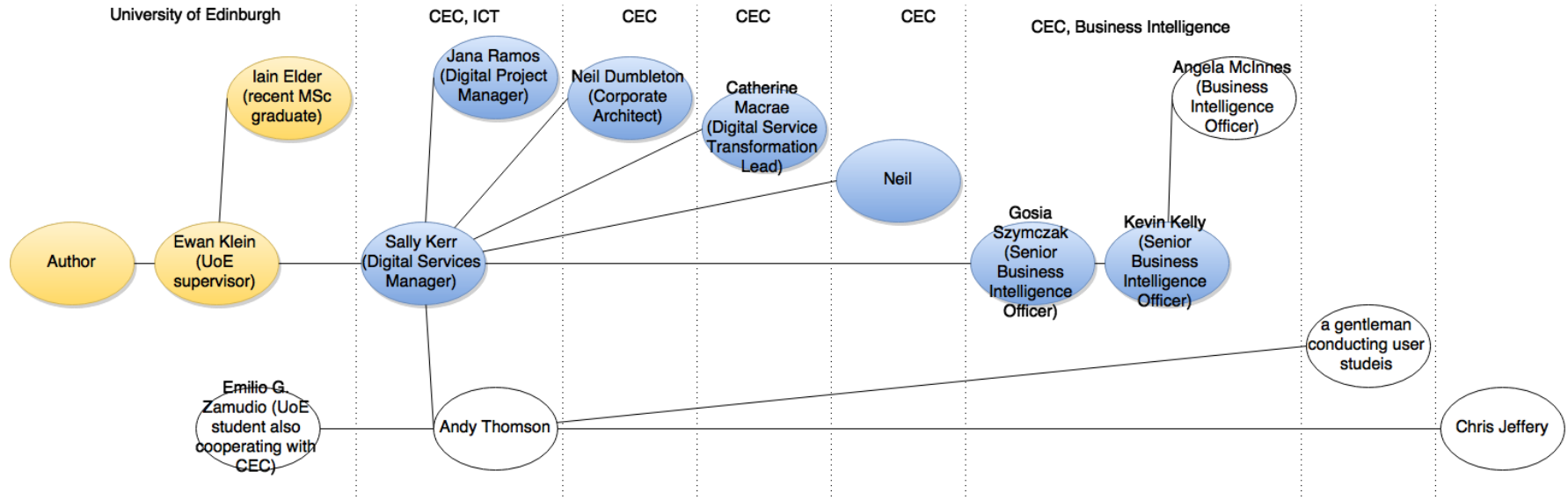
Develop
potential solutions

Deliver
solutions that work



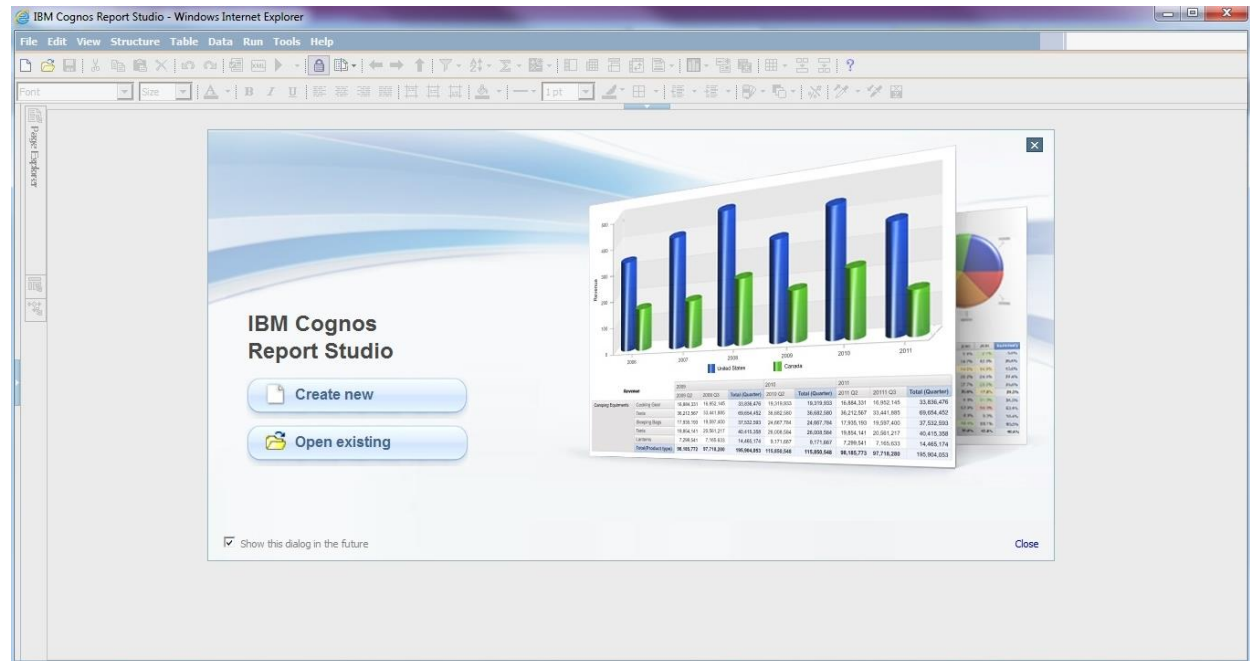
Discover

- ▶ Inspiration (initial influence)
- ▶ Meetings in the Council



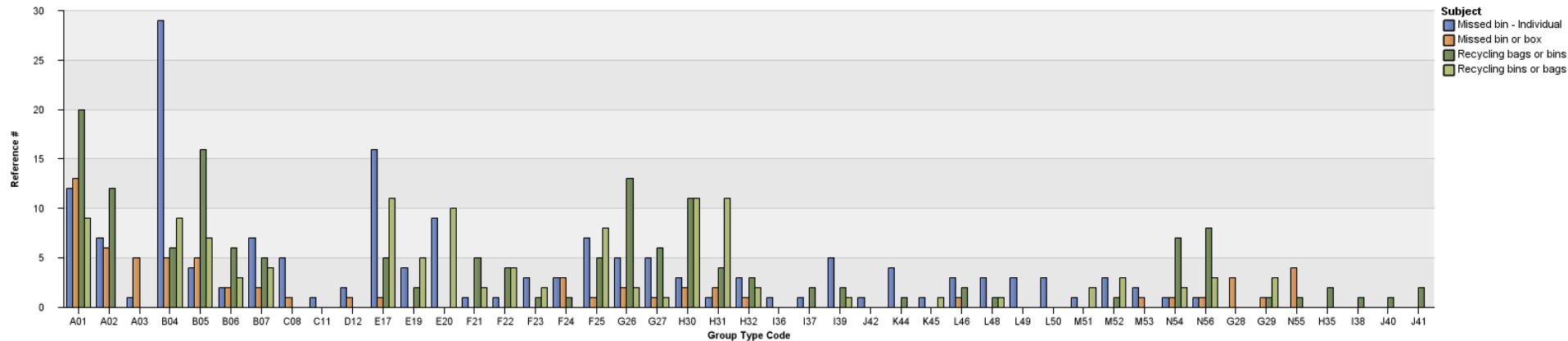
Discover – CEC Systems

- ▶ CRM data
- ▶ Mosaic
- ▶ IBM Cognos



Define

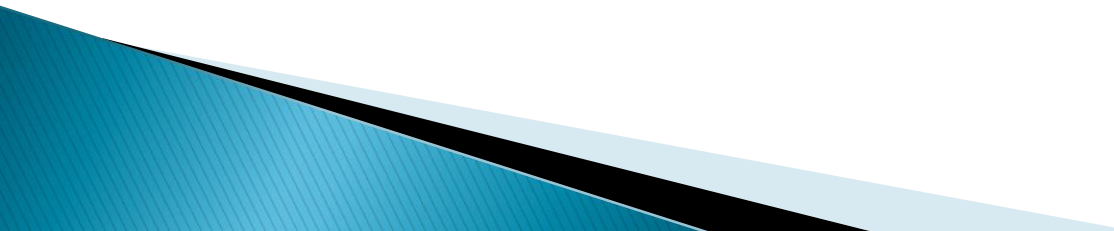
- ▶ Meetings at the Council
- ▶ Proof of concept query to validate a project viable.
- ▶ Test data import/export.



Define

- ▶ Design of the solution (CRM data, Mosaic, Cognos)
- ▶ Design brief for the next stage:

CEC want to know:

- Cases of intentional use of multiple channels for the same issue on same day.
 - Patterns of behaviour across different channels
 - Who are the primary users of the new online services?
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Develop – Report 1 query

▶ Technical design:

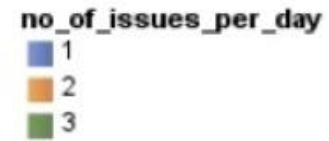
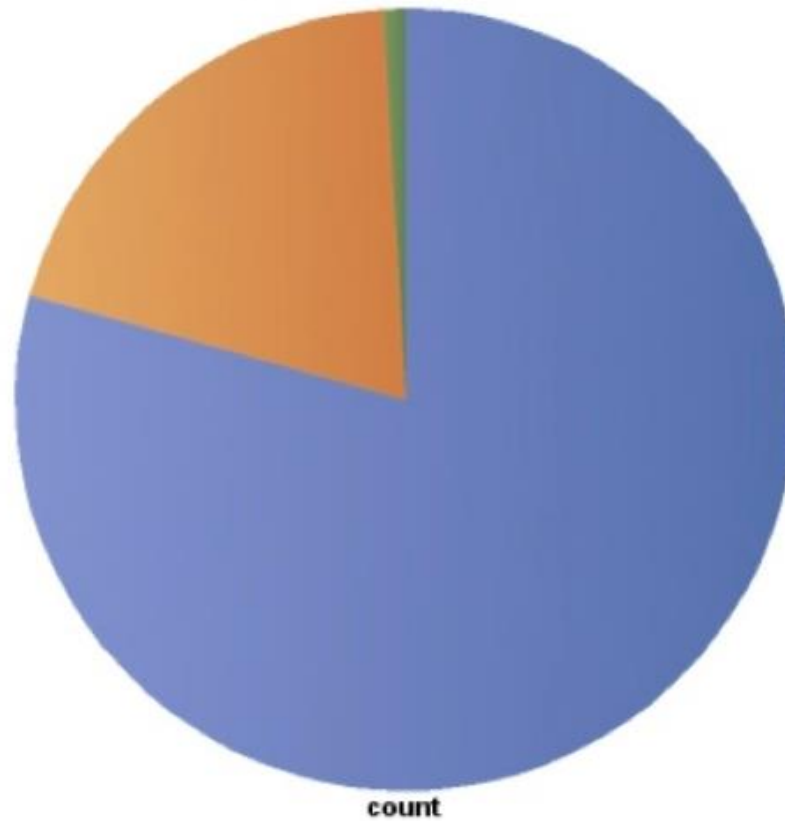
- Query 1: gather all relevant data (do not include entries if channel is not specified) and add a counter for how many issues someone filed on one day.
- Query 2: filter results of Query 1 so that only people who reported more than one issue on one day regarding the same subject are left.
- Query 3: filter out from Query 2 cases with only one occurrence of such behaviour (of multiple issues regarding one subject reported on the same day)

Sample Output – Report 1

Date Created	UPRN	Creation Source	Subject	Reference #	one uprn data subject	Data Item1
15-05-23	000906006873	Web	Missed bin or box	150523-000003	2	2
15-05-23	000906006873	Web	Missed bin or box	150523-000004	2	2
15-05-30	000906006873	Web	Missed bin or box	150530-000068	2	2
15-05-30	000906006873	Web	Missed bin or box	150530-000069	2	2
15-05-12	000906037096	Web	Missed bin or box	150512-001300	2	4
15-05-12	000906037096	Web	Missed bin or box	150512-001304	2	4
15-05-15	000906037096	Web	Recycling bags or bins	150515-000318	2	4
15-05-15	000906037096	Web	Recycling bags or bins	150515-000319	2	4
15-05-18	000906037096	Phone	Recycling bins or bags	150518-001012	2	4
15-05-18	000906037096	Phone	Recycling bins or bags	150518-001073	2	4
15-05-20	000906037096	Web	Request bins - General green	150520-000555	2	4
15-05-20	000906037096	Web	Request bins - General green	150520-000712	2	4

Output - Report 1

no_of_issues_per_day	count
1	776
2	194
3	9



Conclusions – Report 1

- ▶ There is a percentage of customers using multiple channels on same day.
 - Reasons? What does this mean about their confidence with the delivery?
 - Useful to monitor as we work to decrease, otherwise we're not 'shifting'.
 - Taking it forward:
Analysis across their full transaction journey, over a longer period and by transaction types to identify causes.

Develop – Report 2 query

- ▶ Question:
Customers initiating incident on one channel then making contact about it using another?
- ▶ Technical design:
 - Query 1: Filter people that initiated an incident on one channel then subsequently made contact about the same incident reference no. via a different channel.

Output – Report 2

Creation Source	Group	Date Created	Reference #	Subject	Product Hierarchy	UPRN	count no of issues	channels used
Phone	CH - Sfc Customer Services	15-05-11	150511-000837	No Value	Recycling Bins or Bags	000906006224	2	2
No Value	No Value	15-05-11	150511-000849	No Value	Recycling Bins or Bags		2	2
Face to Face	No Value	15-05-19	150519-001294	Request bins - Red and blue boxes	Request new bins	000906009065	12	2
Face to Face	No Value	15-05-19	150519-001295	Request bins - Food kitchen caddy	Request new bins		12	2
Web	No Value	15-05-19	150519-001304	Request bins - Garden	Request new bins		12	2
Web	No Value	15-05-19	150519-001305	Request bins - Red box	Request new bins		12	2
Web	No Value	15-05-19	150519-001306	Request bins - Food kitchen caddy	Request new bins		12	2
Web	No Value	15-05-19	150519-001312	Request bins - Garden	Request new bins		12	2
Web	No Value	15-05-19	150519-001313	Request bins - Red box	Request new bins		12	2
Web	No Value	15-05-19	150519-001314	Request bins - Food kerbside bin	Request new bins		12	2
Web	No Value	15-05-20	150520-000560	Request bins - Garden	Request new bins		12	2
Web	No Value	15-05-20	150520-000561	Request bins - Red box	Request new bins		12	2
Web	No Value	15-05-20	150520-000562	Request bins - Food kitchen caddy	Request new bins		12	2
Web	No Value	15-05-20	150520-000573	Request bins - Food kerbside bin	Request new bins		12	2
Phone	CH - Sfc Customer Services	15-05-11	150511-000919	No Value	Recycling Bins or Bags	000906012778	2	2
No Value	No Value	15-05-11	150511-000930	No Value	Recycling Bins or Bags		2	2
Phone	CH - Sfc Customer Services	15-05-12	150512-000684	No Value	Recycling Bins or Bags	000906012812	2	2
No Value	No Value	15-05-12	150512-000689	No Value	Recycling Bins or Bags		2	2
Phone	No Value	15-05-19	150519-001290	Request bins - Food kitchen caddy	Request new bins	000906018051	2	2
Web	No Value	15-05-20	150520-000503	Request bins - Food kerbside bin	Request new bins		2	2

Conclusions – Report 2

- ▶ Identifies a section of customers doing this around specific transactions
 - Specifically missed bins and requesting new bins.
 - Identified we need to look at these transactions and messaging around elements of service delivery. Eg. communicating bin collection days, SLA's, customer messaging.
 - Taking it forward:
Re-run at intervals to monitor service progress.
Look for patterns in terms of location/timings to help us improve.

Develop – Report 3 query

- ▶ Question:
Who are the primary users of our new online transactions?

Develop – Report 3 query

▶ Technical design:

◦ Query 1:

Gather relevant data

Count number of all interactions of a user.

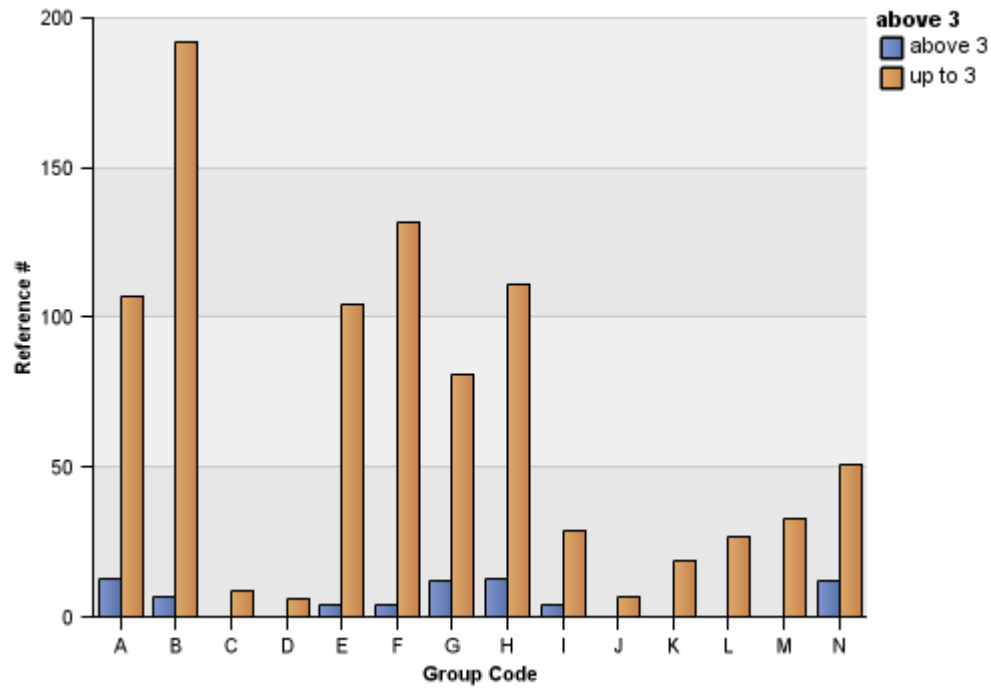
Filter to exclude <3 interactions or incidents.

Assign users to a Mosaic profile segment.

◦ Query 2: Filter results of Query 1 to identify most popular transaction types in this category.

◦ Query 3: Compare most active ‘3 or more’ with less active.

1st Output – Report 3



Deliver – Report 3

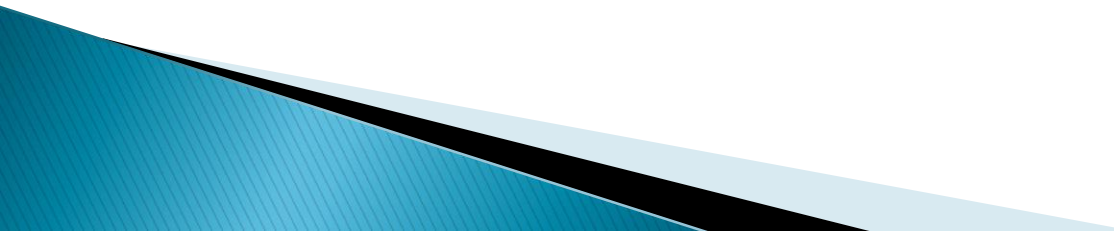


Conclusions – Report 3

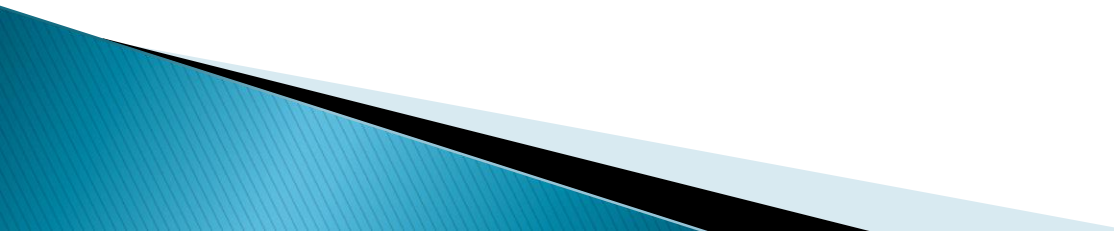
- ▶ First look at actual use by demographics.
 - Gives us something to compare against pre-project projections.
 - Limit: Only tells us those that successfully completed/recorded incidents. No abandonment.
 - Taking it forward:
Good basis to feed into our audience benchmarking and persona work and segment ‘channel shifting’ by customer groups.

Will help identify weaknesses/further questions we can ask.

Michal's Conclusions

- ▶ Project time limited – many open questions
 - ▶ Prototype level product produced
 - ▶ Reports are one thing, what follows is another
 - ▶ Design approach adopted was good in ensuring the project is inline with Council strategy and cross department activity
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CEC Conclusions

- ▶ Project/Double diamond approach was beneficial in joining up Depts. in a large organisation at early maturity
 - ▶ Prototype good basis for further questions
 - ▶ Reports are one thing, what follows is another. Considerations how we embed into business processes.
 - ▶ Thank you!
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Questions

- ▶ Michal's dissertation is available in full at:
- ▶ <https://goo.gl/im3ZM9>
- ▶ And the entire repo:
https://github.com/mwasilew3/MSc_LaTeX_template