

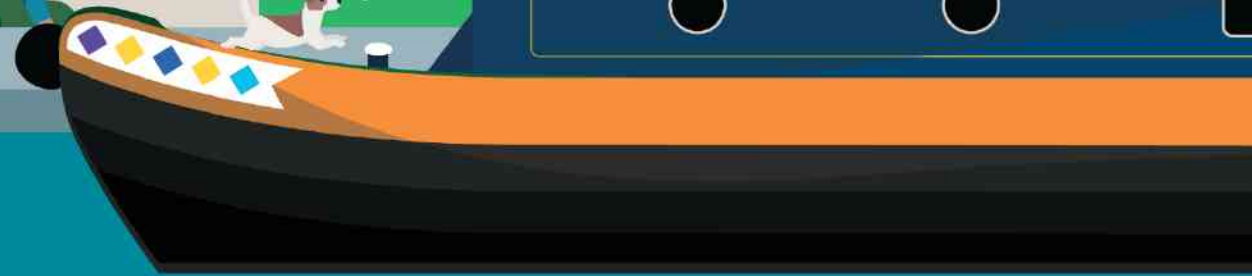


Canal &
River Trust

Making life better by water

How to Develop A3 Problem Solving Capability

Andy Glyde
David Baldacchino
Zoe Briggs



Andy Glyde



Internal Audit & Risk
manager

David Baldacchino



Head of Operations
Support

Zoe Briggs



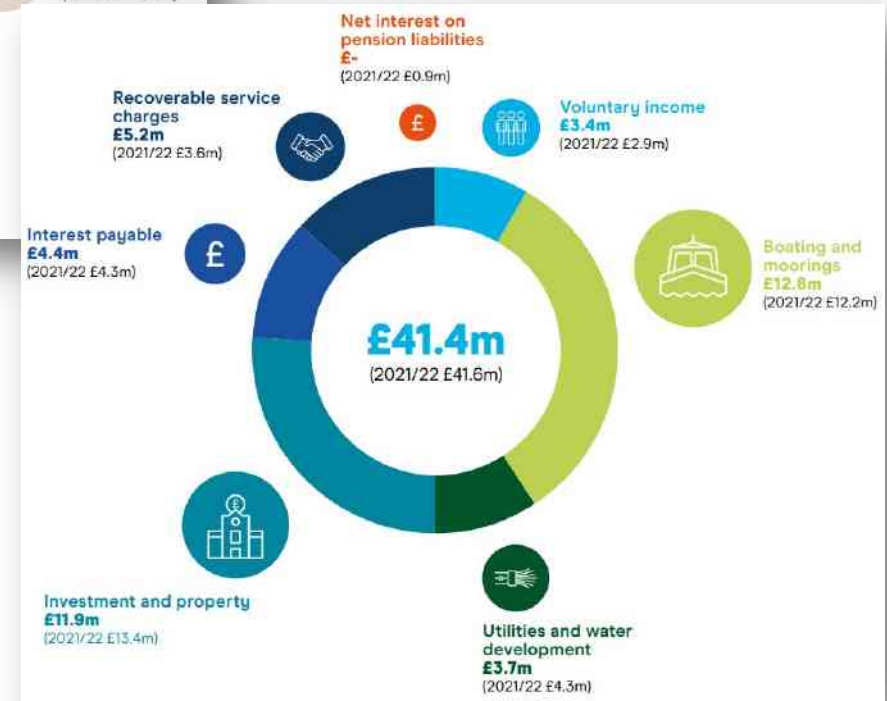
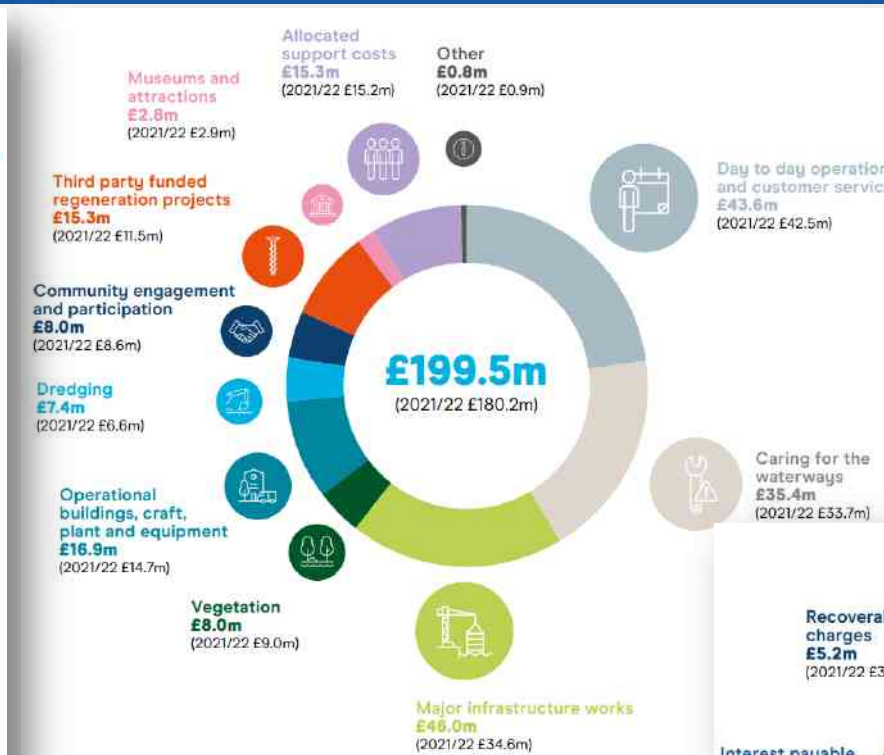
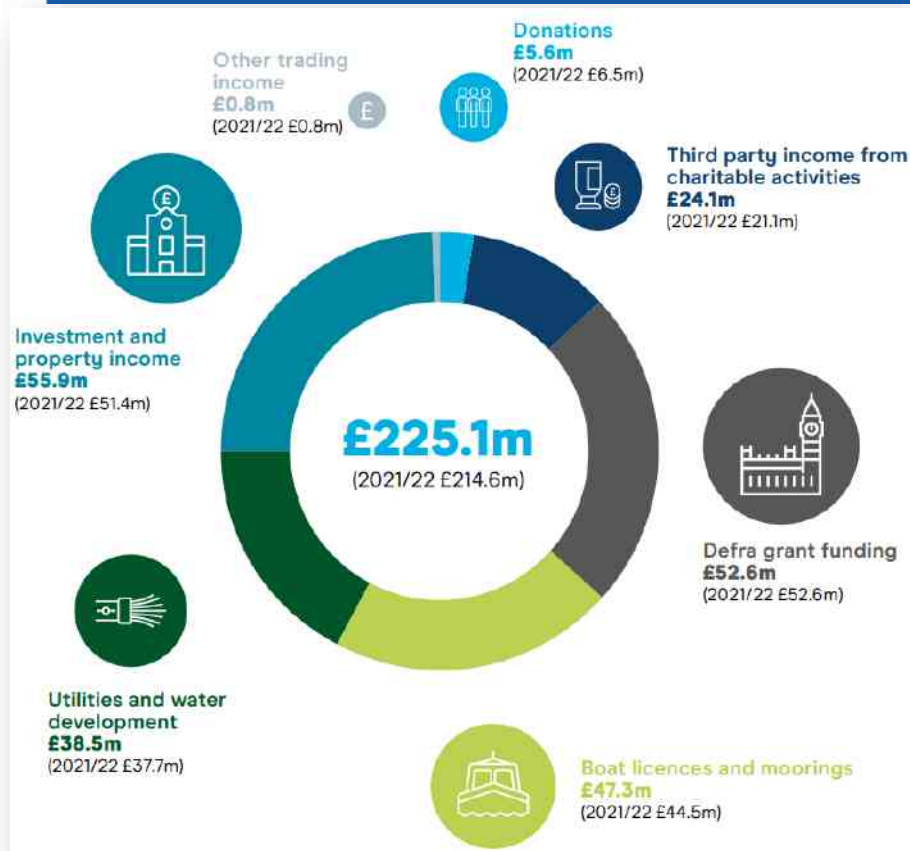
Geographic
Information System
(GIS) Manager

- Who are the Canal & River Trust
- What problems do we have to solve
- Working with LEA
- Being taught to fish
- Doing some fishing
- Exercise: Continuous Improvement – What a load of rubbish
- Teaching others
- What do our people think
- Where are we headed

Who are the Canal & River Trust



What problems do we have to solve?



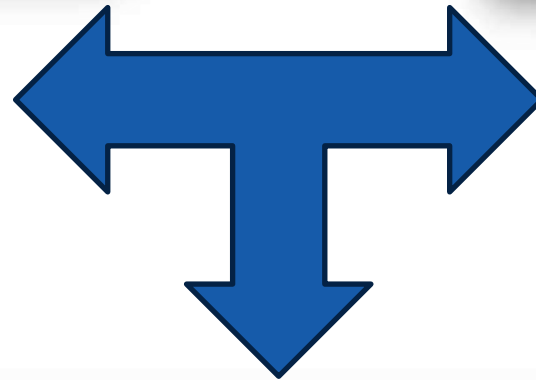
Income **£225.1m** ← Expenditure on charitable activities **£199.5m** + Expenditure on raising funds **£41.4m**

What problems do we have to solve?





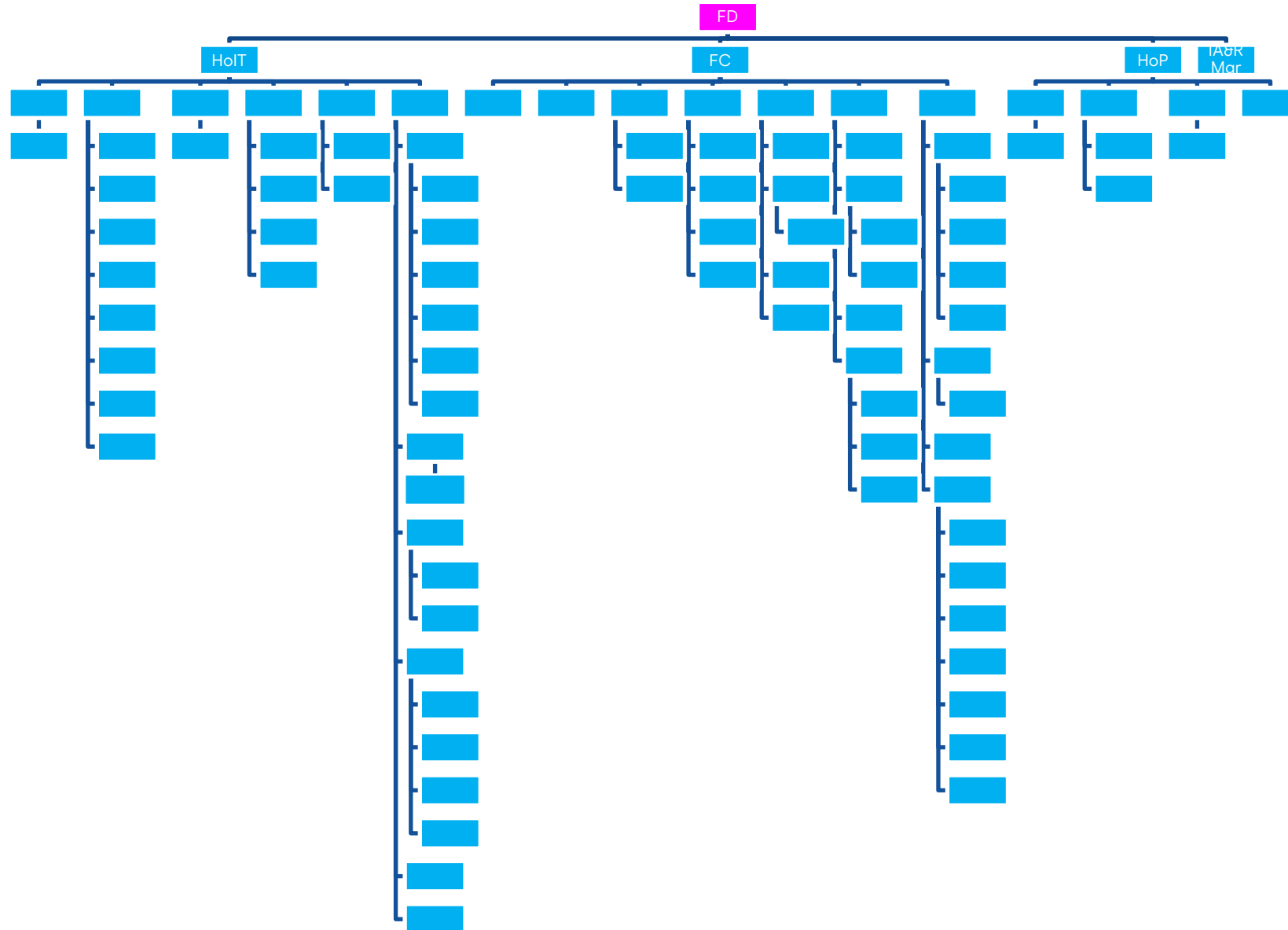
Steve Dainty



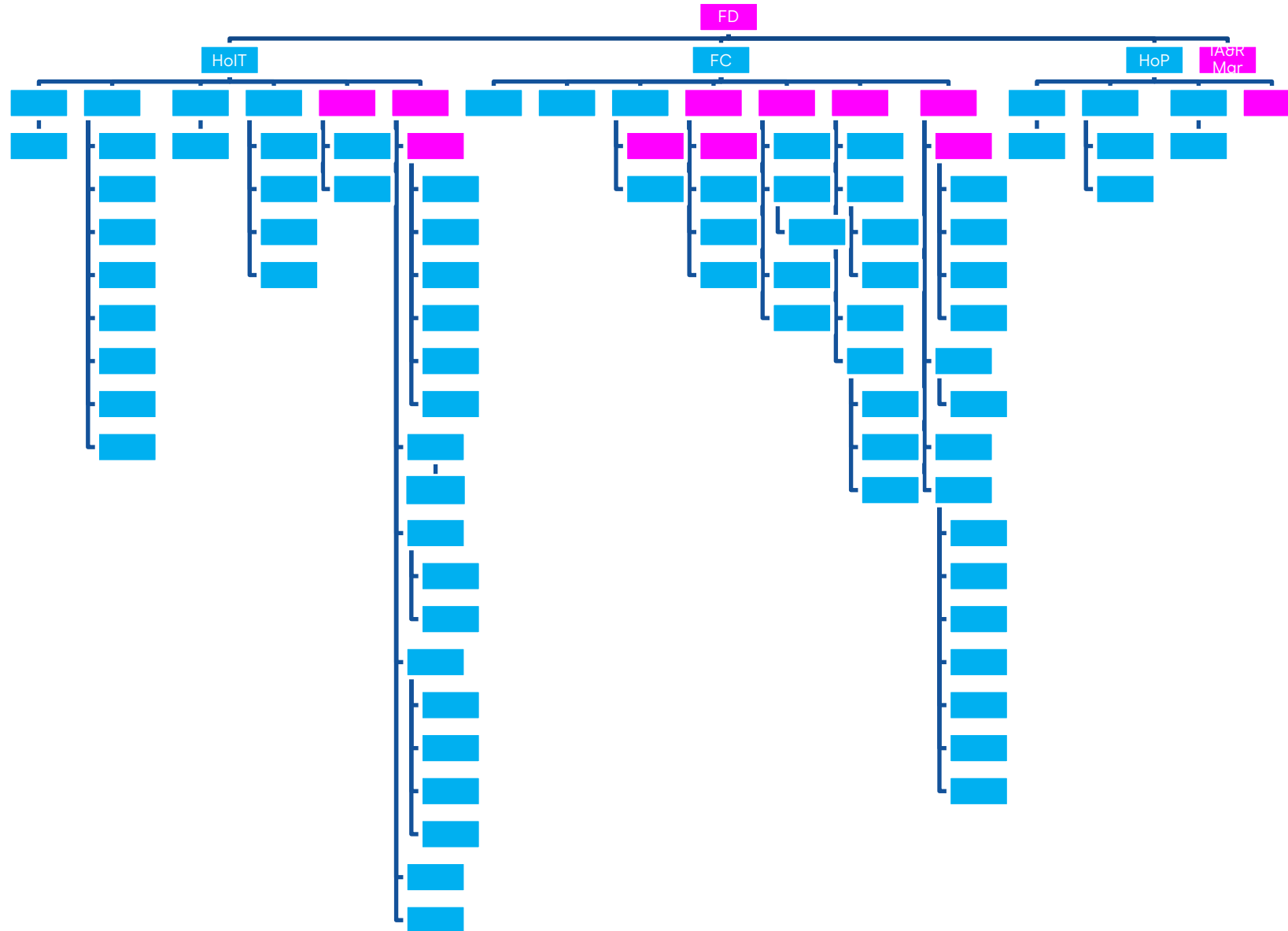
Peter Watkins
David Marriott



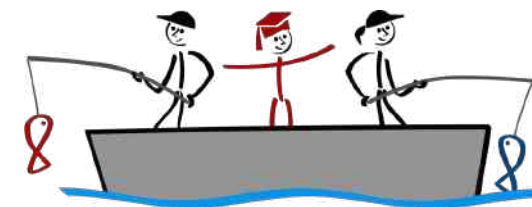
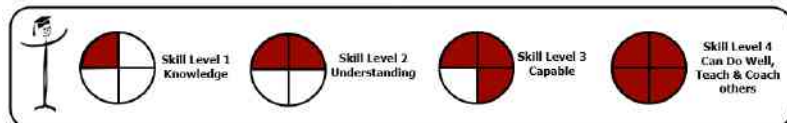
Being taught to fish



Being taught to fish

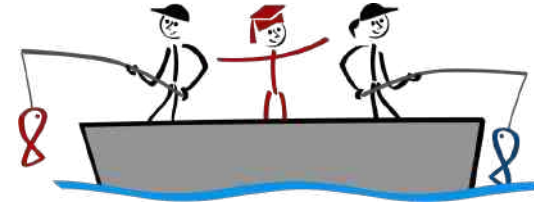


Being taught to fish – phase 1



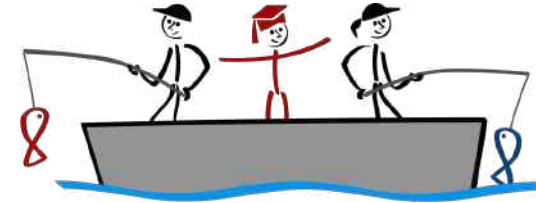
Capability Level	<i>Phase 1 - BPI Introduction & Problem Solving Skill Level 1 (3 Hrs over 2 weeks)</i>		<i>Phase 1 - Problem Solving Skill Level 2 - Understanding (12 Hours over 2 weeks)</i>			<i>Phase 1 - Problem Solving Skill Level 3 - Capable (14.5 Hours over 14 weeks)</i>													
Stage	Give awareness of the real Purpose to Problem Solving		Give awareness of the real Purpose to Problem Solving		Give understanding of how to apply 8 step Practical Problem Solving Method	Course Review	Skill Level 2 Debrief & Problem Selection	Pre-Work Business Problem Selection	Skill Level 3 Introduction, Problem Agreement & Evaluation	Progress Problem through steps 1- 3 (PDCA)			Progress Problem through steps 4 to 8 (PDCA)			Leadership Final Report Out			
Learning Points	Why problem solving is so important		Why problem solving is so important		Deep teach of the 8 Steps and creation of A3 Practice using case study & reflection	Confirm & Check understanding of Steps 1- 3	Confirm & Check understanding of Steps 4 - 8	Align Problem selection to Business Objectives	Introduction to Skill level 3 & Review Problem Selection	Problem Clarification & Containment	Breakdown & Analysis	Target Setting & Root cause	Plan Countermeasures, Check Results, Standardise & Share	Share Learnings & Recognition					
Activity	Online Course using LEA Learning Platform		Online Course using LEA Learning Platform		Online Course using LEA Learning Platform	Online Review with LEA Coach	Online Review with LEA Coach	Select & Agree Business Problems to Work On	Online Review with LEA Coaches	Live online Coaching of each Leader, feedback & evaluate their A3 progression					Online Review with Senior MMC Leaders				
Schedule & Timing Commitment	Week 1 2 Groups Together	Week 2 2 Groups Together	Weeks 1 & 2 Self paced - 2 hrs		Weeks 3 & 4 Self paced - 12 hrs		End of Week 3 2 groups of 3 Leaders	End of Week 4 2 groups of 3 Leaders	MMC Internal Process & Timings	Week 5 2 Groups	Weeks 6 - 12 2 Groups of 3 Leaders					Weeks 18 - 2 Groups of 3 Leaders			Week 19 2 x Groups
	1.0 hrs	1.0 hrs					1.0 hrs	1.0 hrs		1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs

Being taught to fish – phase 2

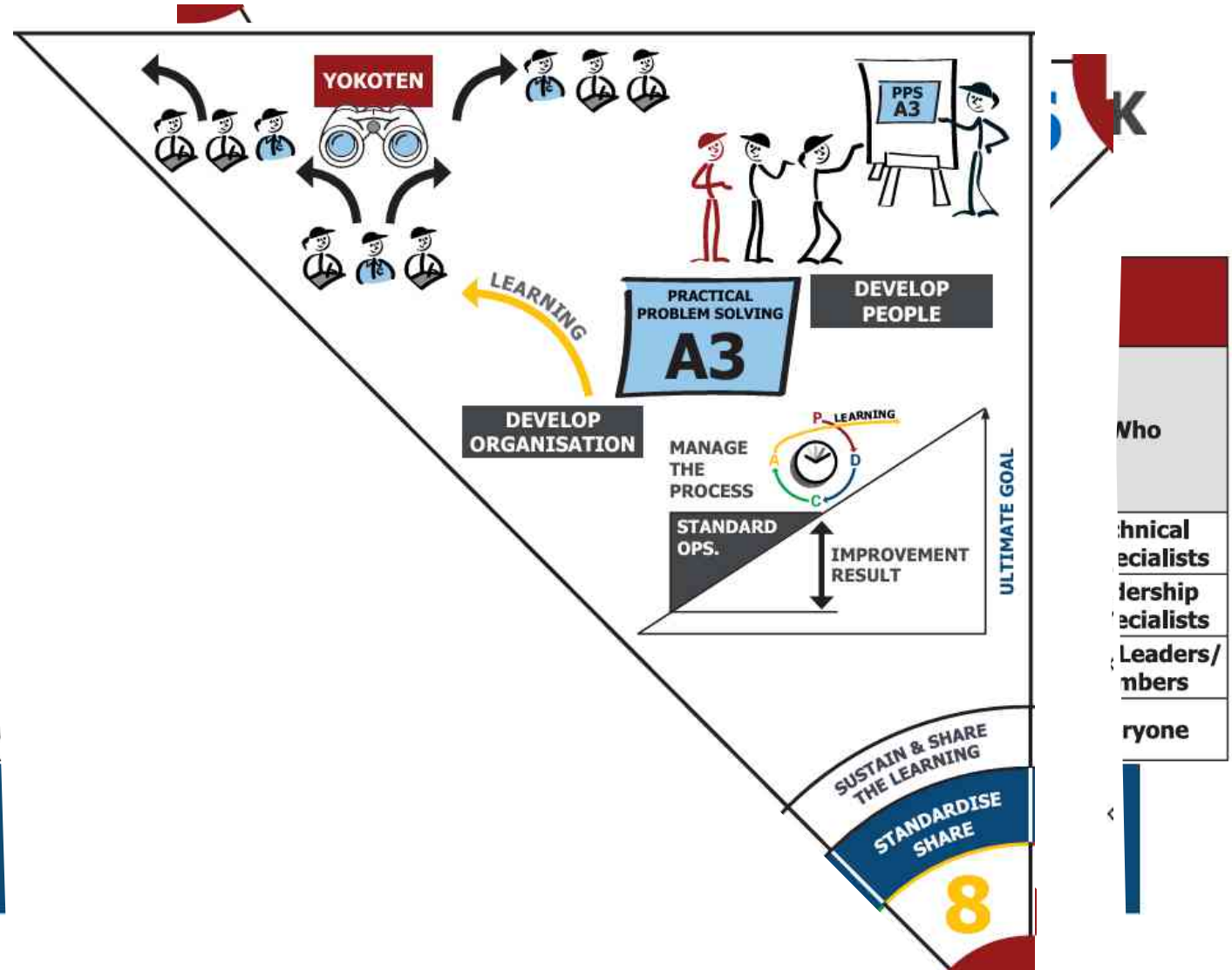
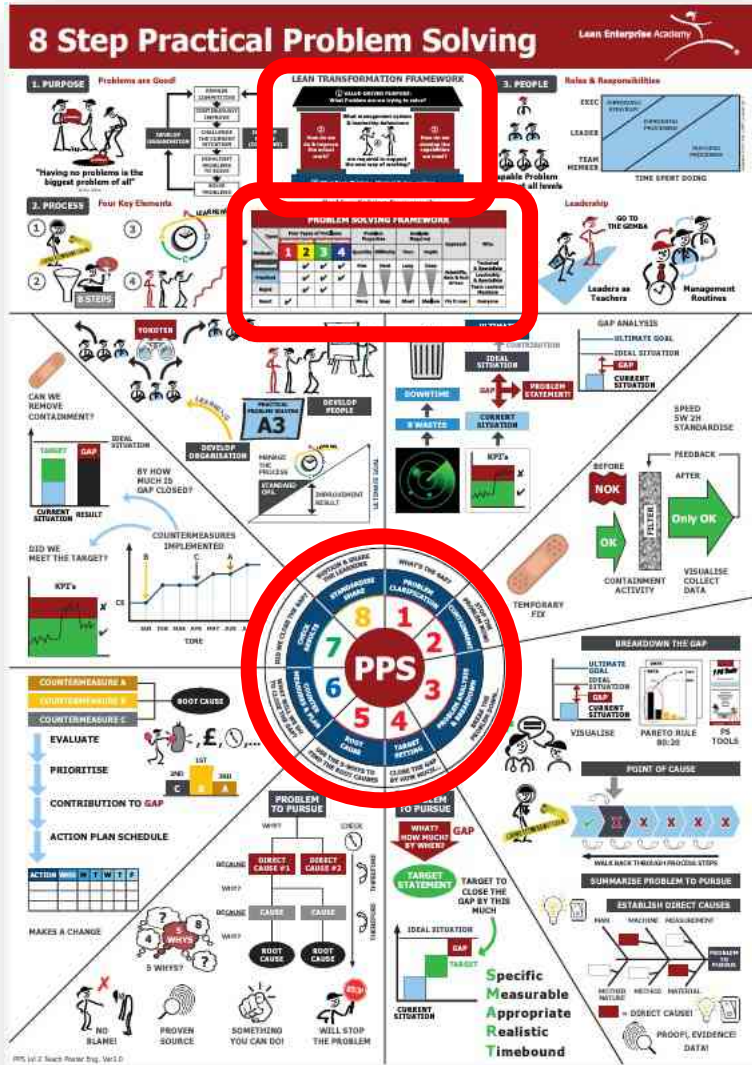


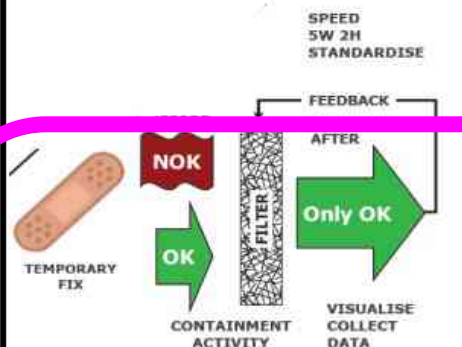
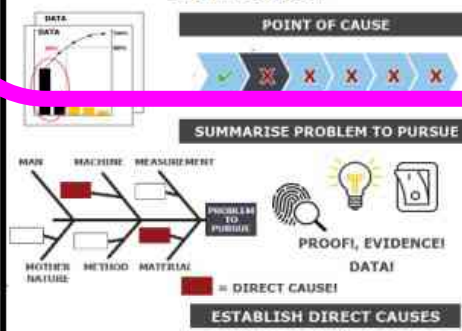
Capability Level	Phase 2- BPI Mapping - Skill Level 1 - 3 (14.5 Hours over 15 weeks)													
Stage	Pre-Work Business Process Selection	BPI 8 Step Introduction	Progress Problem through steps 1- 3 (PDCA)				Progress Problem through steps 4 to 8 (PDCA)				Leadership Final Report Out			
Learning Points	Align Process selection to Business Objectives	Introduction to BPI Mapping & Review Process Selection	BPI Mapping Steps 1- 2		BPI Mapping Steps 2 - 3		BPI Mapping Steps 4 - 6		BPI Mapping Steps 7 - 8		Share Learnings & Recognition			
Activity	Select & Agree Business Process to Work On	Online Review with LEA Coaches	Live online Coaching of each Leader, feedback & evaluate their progression				Live online Coaching of each Leader, feedback & evaluate their progression				Online Review with Senior MMC Leaders			
Schedule & Timing Commitment	Internal Process & Timings	Week 20 2 Groups	Weeks 21 - 26 2 Groups of 3 Leaders						Weeks 27 - 32 2 Groups of 3 Leaders					Week 33 2 x Groups
		1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.5 hrs each group	

Being taught to fish – phase 3



Lean Leadership Development Programme																												
Capability Level	Phase 3 - Management System, Leadership Skills & Employee Involvement (14.5 Hours over 15 weeks)																											
Stage	<table border="1"> <tr> <td>Pre-Work EI Team Selection</td> <td>Phase 3 Introduction</td> <td colspan="3">Progress Problem through steps 1-3 (PDCA)</td> <td colspan="3">Progress Problem through steps 4 to 8 (PDCA)</td> <td>Leadership Final Report Out</td> </tr> </table>	Pre-Work EI Team Selection	Phase 3 Introduction	Progress Problem through steps 1-3 (PDCA)			Progress Problem through steps 4 to 8 (PDCA)			Leadership Final Report Out																		
Pre-Work EI Team Selection	Phase 3 Introduction	Progress Problem through steps 1-3 (PDCA)			Progress Problem through steps 4 to 8 (PDCA)			Leadership Final Report Out																				
Learning Points	<table border="1"> <tr> <td>Align EI Team selection to Business Objectives</td> <td>Phase 3 Material Review & EI Team Review</td> <td>Daily Performance Management system</td> <td>Core Leadership Skills</td> <td>Employee Involvement Team Working</td> <td>Lean Fundamentals</td> <td>Share Learnings & Recognition</td> </tr> </table>	Align EI Team selection to Business Objectives	Phase 3 Material Review & EI Team Review	Daily Performance Management system	Core Leadership Skills	Employee Involvement Team Working	Lean Fundamentals	Share Learnings & Recognition																				
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Schedule & Timing Commitment	<table border="1"> <tr> <td rowspan="2">Internal Process & Timings</td> <td>Week 34 2 Groups</td> <td colspan="6">Weeks 35 - 40 2 Groups of 3 Leaders</td> <td colspan="6">Weeks 41 - 45 2 Groups of 3 Leaders</td> <td>Week 46 2 x Groups</td> </tr> <tr> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.0 hrs</td> <td>1.5 hrs each group</td> </tr> </table>	Internal Process & Timings	Week 34 2 Groups	Weeks 35 - 40 2 Groups of 3 Leaders						Weeks 41 - 45 2 Groups of 3 Leaders						Week 46 2 x Groups	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.5 hrs each group
	Internal Process & Timings		Week 34 2 Groups	Weeks 35 - 40 2 Groups of 3 Leaders						Weeks 41 - 45 2 Groups of 3 Leaders						Week 46 2 x Groups												
1.0 hrs		1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.0 hrs	1.5 hrs each group																



2.0 Containment		
Expected Content	Evaluation Levels	Coaching Questions
<ul style="list-style-type: none"> - Customer needs and containment considered - Speed, priority and feedback. - Who, What, Where, When, Why, How, How much. 	<ol style="list-style-type: none"> 1 Containment considered but method is weak. 2 Containment (5W,2H) done, but the start date, date, impact on gap, actions taken are not clear. 3 Closed loop containment done. Method, start date actions taken and impact on gap clearly explained and visualised to demonstrate it is working. Reasons for NOK results explained. 4 In addition it is being used to collect data to help understand the problem more (for Step 3) 5 Also, the content is simple, clear and easy to share with no explanation. 	<ol style="list-style-type: none"> a. How did you decide about doing containment or not? b. What was the method you put in place? c. When did the containment start? d. What is the customers feedback about the containment activity? e. How did you check the containment was working? f. What kind of actions have been taken during the containment activity? g. What did you learn from the containment that might help you later on? h. What other areas could be affected by this problem?
3.0 Problem Analysis & Breakdown		
Expected Content	Evaluation Levels	Coaching Questions
<ul style="list-style-type: none"> - Breakdown the Problem using data and facts (7 PPS Tools). - Select and state the Problem to Pursue. - Locate Point of Cause by Go & See. - Identify and confirm Direct Cause(s) through data and investigation 	<ol style="list-style-type: none"> 1 CS/Gap is not broken down enough. Too high level, mainly opinions little data or facts. 2 Breakdown with data done, but difficult to understand the logic story. Point of Cause, Problem to Pursue & Direct Causes not stated or proved. 3 Deep, logical breakdown done to determine/prove the Point of Cause (where), Problem to Pursue (what, when, how) and Direct Causes (why). Evidence of Go & See & gap contribution defined. 4 The investigation is so deep that no question remains unanswered. Every avenue is covered. 5 Also, the problem is made so simple, clear and easy to share with no explanation. 	<ol style="list-style-type: none"> a. Tell me how you went about analysing the Current Situation/Gap? b. How have you categorized the problem in to smaller ones? c. What have you learned about the problem - e.g what, where, when or how, that might help you break it down? d. What did you find when you went to see it for yourself? e. How would you summarize the problem in your own words? f. How did you check that they are Direct Causes? (1st Why) g. Are there any of the other 7 PPS Tools you can use to break it down? h. By how much will solving this problem close the gap by? i. How can you show the data better to highlight the issues or bring out the key points?



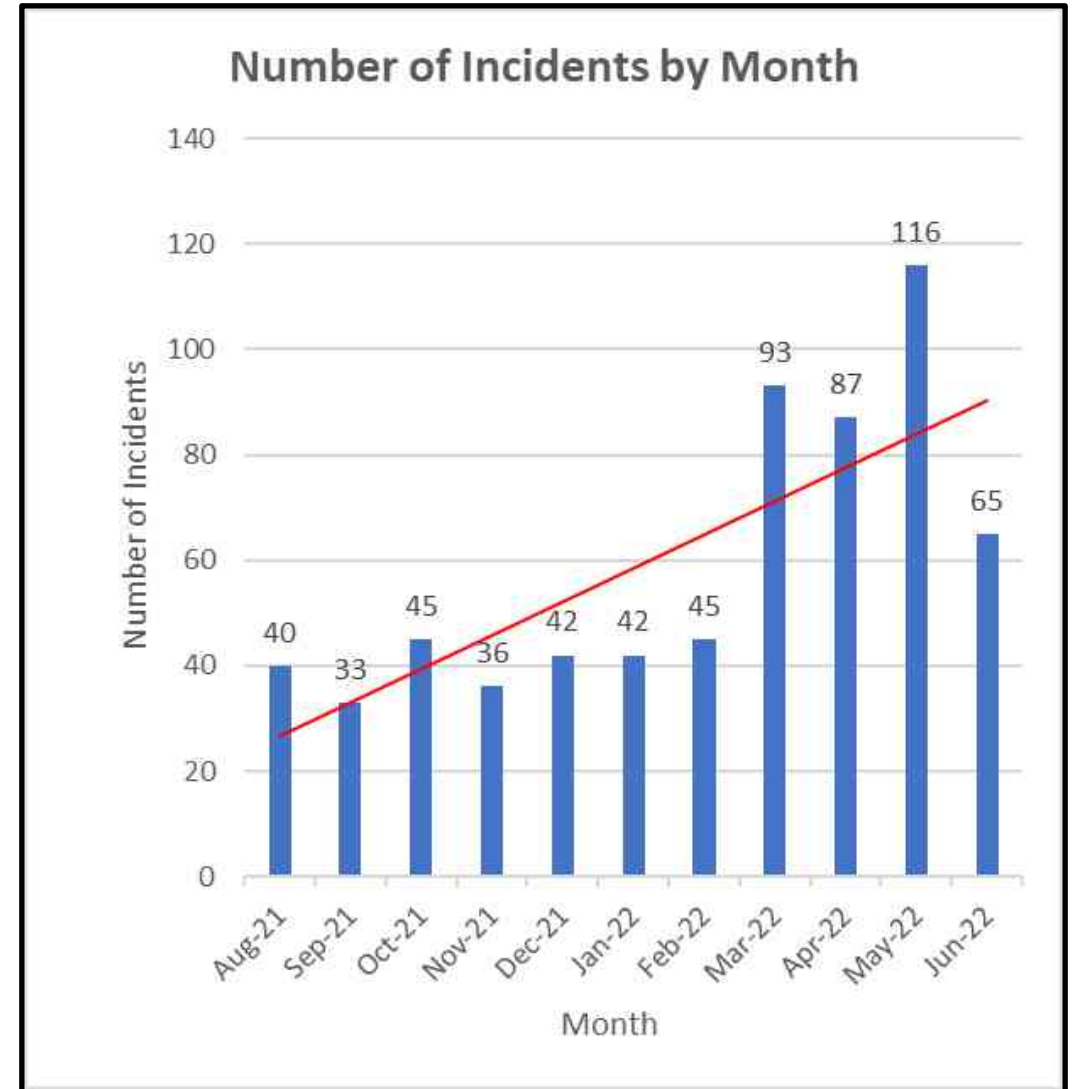
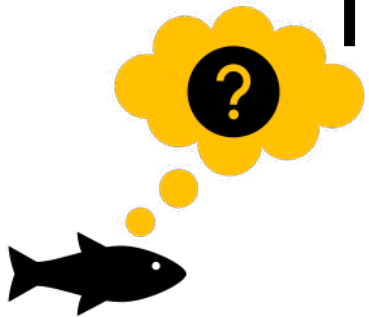
PPS A3 Coaching Session Ratings and Progress Summary

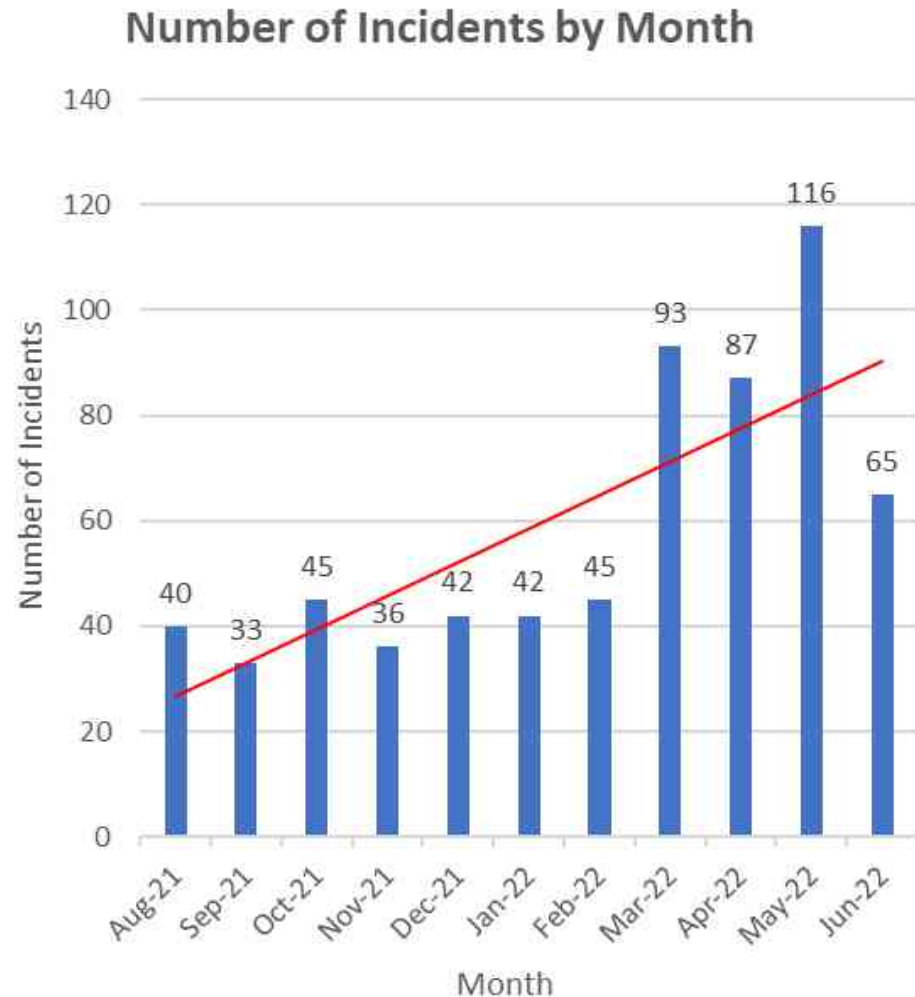
Delegate #	Review Sessions		#1								#2								#3								#4													
	Dates		25/03/21								22/04/21								20/05/21								08/07/21													
	Delegate Name	PPS Ratings	PPS STEPS								A3	Average	PPS STEPS								A3	Average	PPS STEPS								A3	Average								
			1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
#1	Grace	Plan	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
	Manual Workflow Reduction	Actual	2.9	2.4	2.2	/	/	/	/	3.0	2.6	3.0	2.6	2.5	/	/	/	/	3.1	2.8	3.2	3.0	2.9	2.3	2.1	/	/	/	/	3.5	2.8	3.6	3.3	3.3	2.8	2.9	2.5	1.0	1.0	3.8
#2	Sarah	Plan	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Unallocated Lines of Cash	Actual	2.5	2.2	2.3	/	/	/	/	2.8	2.5	3.0	3.0	2.6	/	/	/	/	2.9	2.0	3.0	3.1	2.8	1.0	1.0	/	/	/	/	3.0	2.3	3.3	3.6	3.5	3.1	3.1	3.1	1.0	1.0	3.5
#3	Andy	Plan	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	3.0	/	/	/	/	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Actions on Corporate Risk Exposure	Actual	2.2	2.3	2.1	/	/	/	/	2.7	2.3	1.9	2.0	2.1	/	/	/	/	2.5	2.1	3.0	2.5	3.0	1.6	2.2	/	/	/	/	3.0	2.5	3.6	3.2	3.5	2.9	3.0	3.0	1.0	1.0	3.4
#4	started for Review #2.	Plan																									3.0													
		Actual	#REF!																								#REF!													

Repetition and challenge leads to improvement

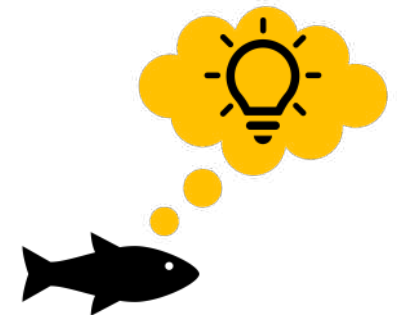
Notes: Target is to achieve at least an average rating of 3.0 or above to demonstrate capability in the application of the PPS A3 process to solve a problem.

How do you solve
a problem like
Service Desk
Incident
increases?

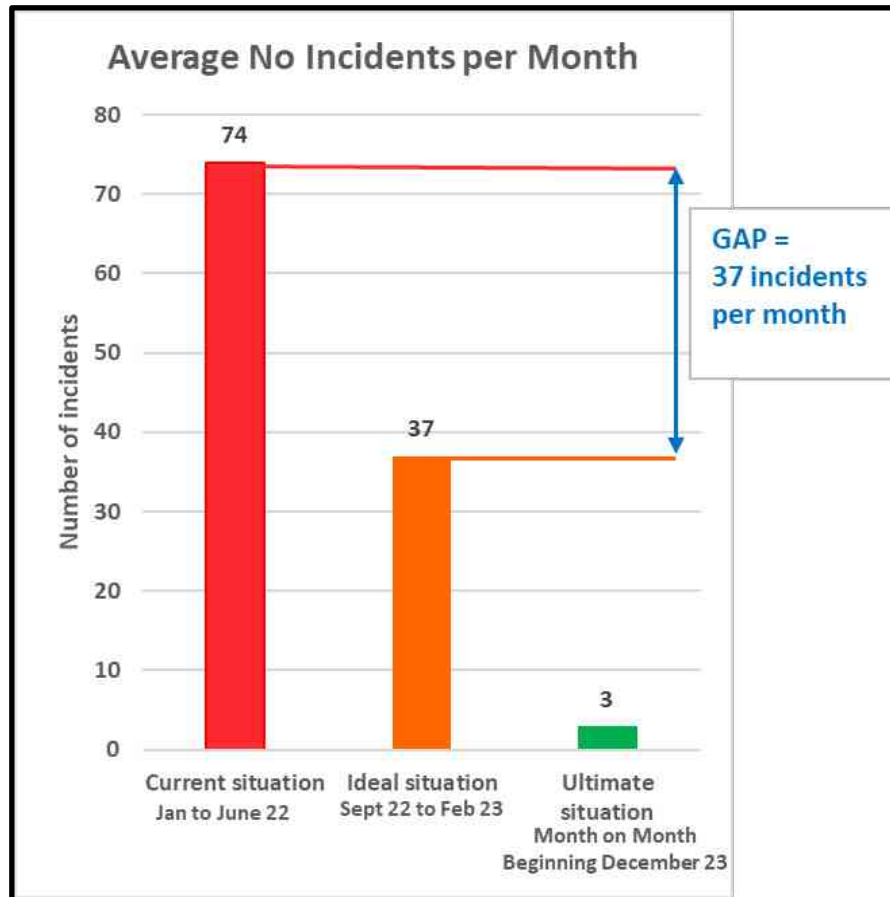




You do a
LEAN A3 of
course!



Problem statement – What is the problem?



Ultimate Goal:

Average 3 GIS service desk incidents per month by 31/12/2023 (average reduction of 71 incidents per month). KPI set by the Operations Manager.

Ideal Situation:

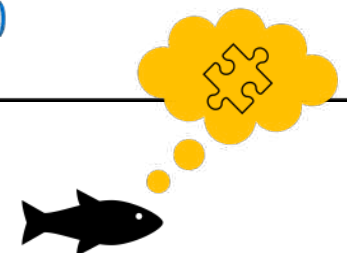
Average 37 GIS service desk incidents per month back to the level incidents were at between Aug 21 to Feb 22 averages.

Current Situation:

GIS Service desk incidents are at an average of 74 per month

Problem Statement:

GIS Service desk incidents numbers from an average of 74 per month to an average of 37 per month (a gap of 37 incident or 50%)

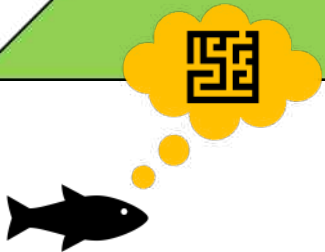


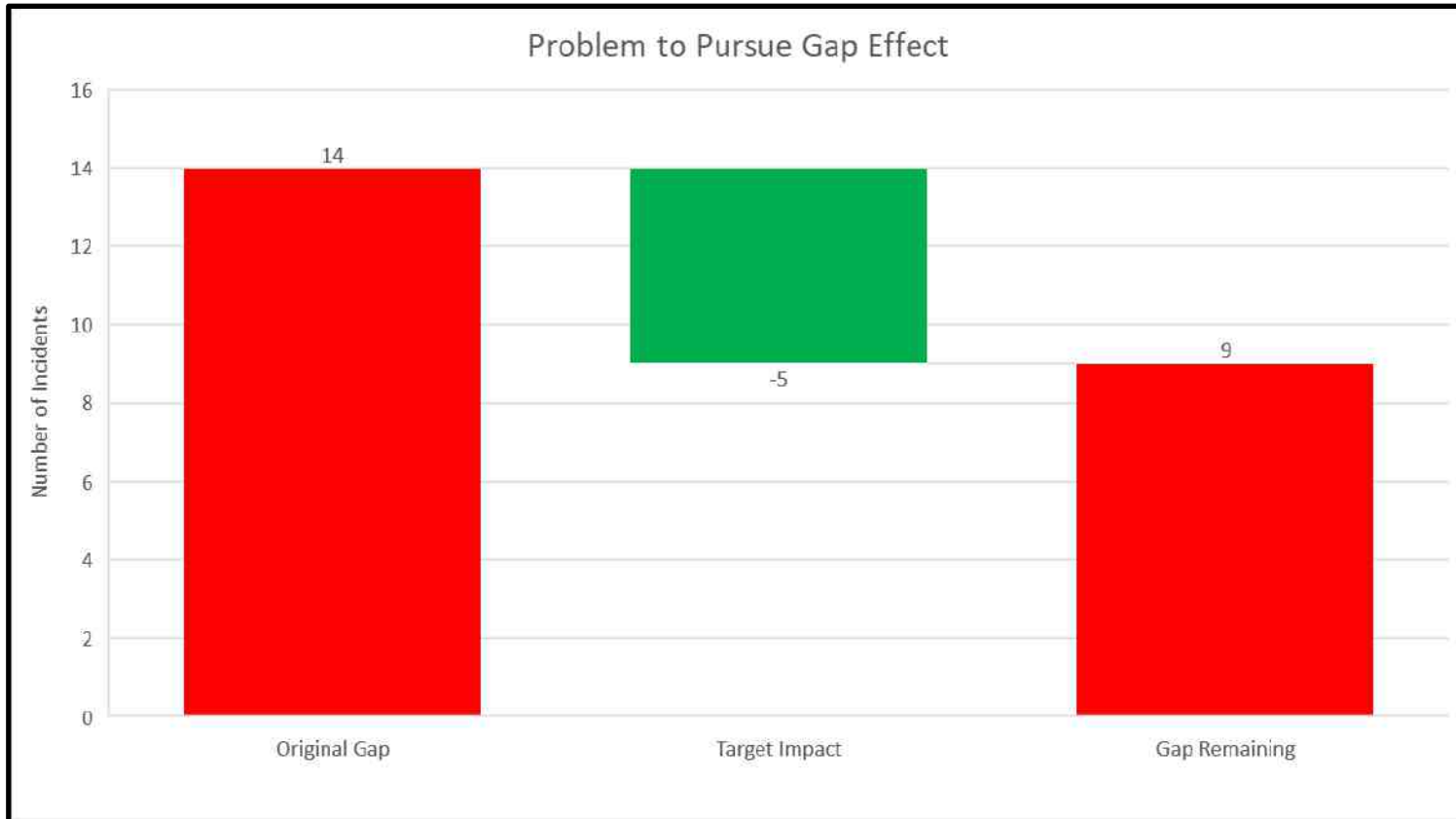
Identifying the Problem to Pursue

! Problem to Pursue !

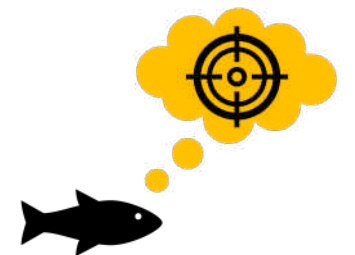
**User file updates for Audits in Survey123 in the West Midlands Team in the Operations directorate.
This worth 10% (5 out of 55) of the problem and 35% (5 out of 14) of the Gap**

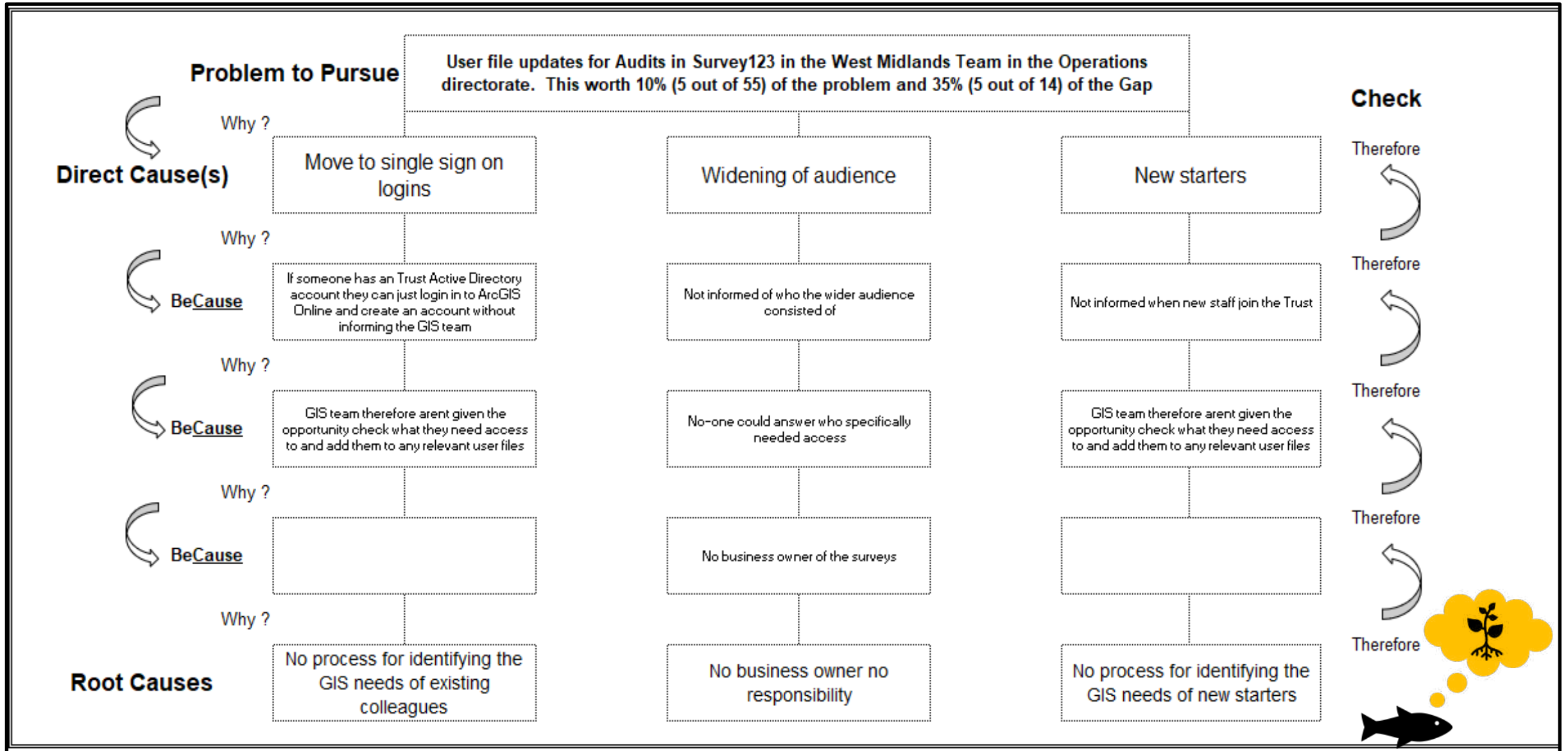
Point of Cause



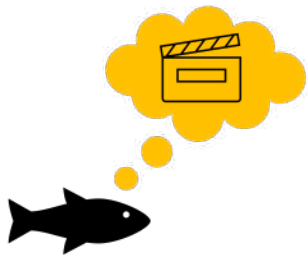


Setting a Target





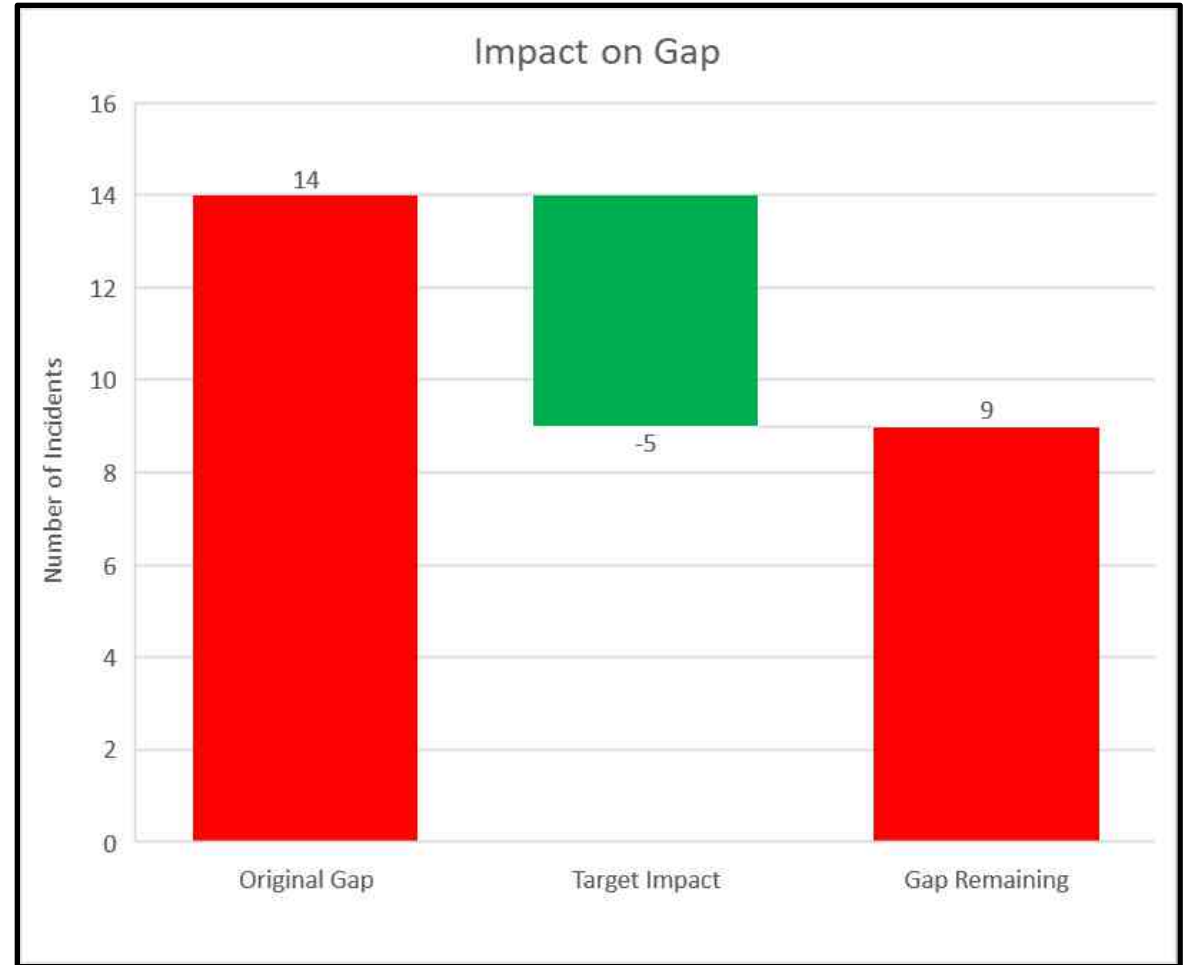
Counter-measures



Root Cause Countermeasures	
Root Cause	Countermeasure Actions
1 No process for identifying the GIS needs of existing colleagues	Get a list of all active Trust colleagues from ArcGIS Online and match against the user lists and removing any old style usernames.
	Get a list of all active Trust colleagues on a set date from SAP and check the user lists against it, removing those who have left the Trust and adding those who have joined the Trust.
	Monitor the number of requests coming from through service desk to ensure countermeasure actions are working
2 No business owner no responsibility	Identify an appropriate person and deputy to be the business owner of the Dynamic Risk Assessment
	Identify an appropriate person and deputy to be the business owner of the Audits
	Create a clear guide as to role and responsibilities of a business owner
	Build into the projects process the identification of a business owner and deputy early on to prevent this root cause occurring in other projects
3 No process for identifying the GIS needs of new starters	Create a list of business owners for the projects and check every 6 months that the information is correct
	Create process to get a list of news starters and their role from SAP at regular time intervals
	Add GIS requirements to the new user request form
	Get a list of all active Trust colleagues on a set date from SAP and check the user lists against it, removing those who have left the Trust and adding those who have joined the Trust
	User self service form to add themselves to the relevant user file
Monitor the number of requests coming from through service desk to ensure countermeasure actions are working	

Outcomes

The gap has
reduced by 35%
(5 out of 14 of the
gap)



- Common weaknesses

- Poor data quality
- Out of date processes
- Historical 'improvements' have increased complexity
- No clear link between inputs and outputs
- Silo thinking and working
- Unclear expectations and responsibilities
- Lack of training
- Lack of standardisation

- Real world benefits

- >£100,000 direct savings
- Better management systems - improved monitoring, expectation setting and feedback
- Increased overnight processing
- Less coding and processing time
- Simplified expenses, more VAT back
- Quicker mobile phone rollout
- Safer use of lifejackets and lifting gear

WHAT A
LOAD OF
RUBBISH!!!!



Can you fix our fly tipping problem

Working in small groups you will all have the same problem to solve, being:

- **Fly tipping costs are through the roof**
- **The Exec want an answer – ASAP!!!!**

We will have regular pauses and updates throughout the exercise

At the end we will get feedback from all groups – hopefully, you will all have a fix!!

Good Luck, we really need to sort this mess out!!

So what was the answer?

- There were multiple problems including:
 - Insufficient bins / poor facilities
 - Lack of monitoring
 - Cost cutting too far
 - Public behaviour
 - Lack of data analysis in the first place
- No one containment would help all regions but increased scheduled collections may have been a reasonable stop gap.
- Countermeasures would need to be different in different regions.
- Further analysis would demonstrate which gave the most benefit – we should do that first and then move on to the next.

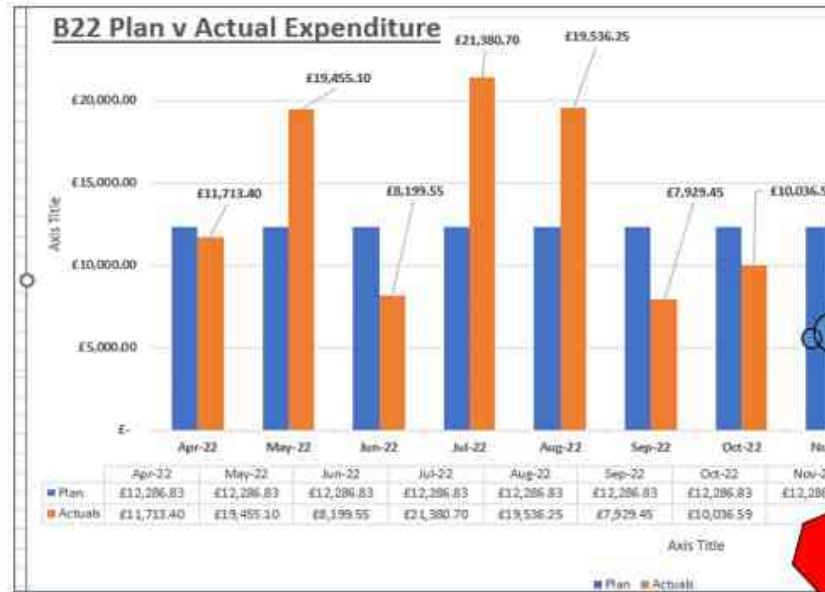
What does this tell us, how can CI help

- It's easy to get the wrong impression and jump to conclusions
- One size doesn't always fit all
- Looking through different lenses gives different insight
- Containment can be quick, countermeasures take time
- Data, and speaking to everyone who has info is vital
- Systematically finding the root cause can prevent costly mistakes

Seasonality

Individual transactions
of £2k - £3k

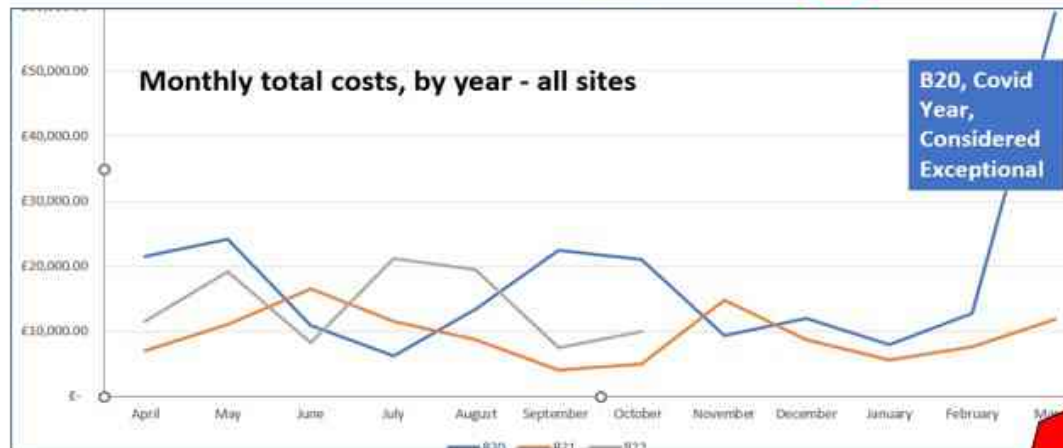
Focus on Top 5 Most Costly Sites - GAP = £25k



Even phasing -
How realistic
was planning?

Current
overspend
£7k, expected
to grow

1



No obvious
seasonality,
exceptional
spend in B20

2

How it looks on the ground - whats actually happening?

3

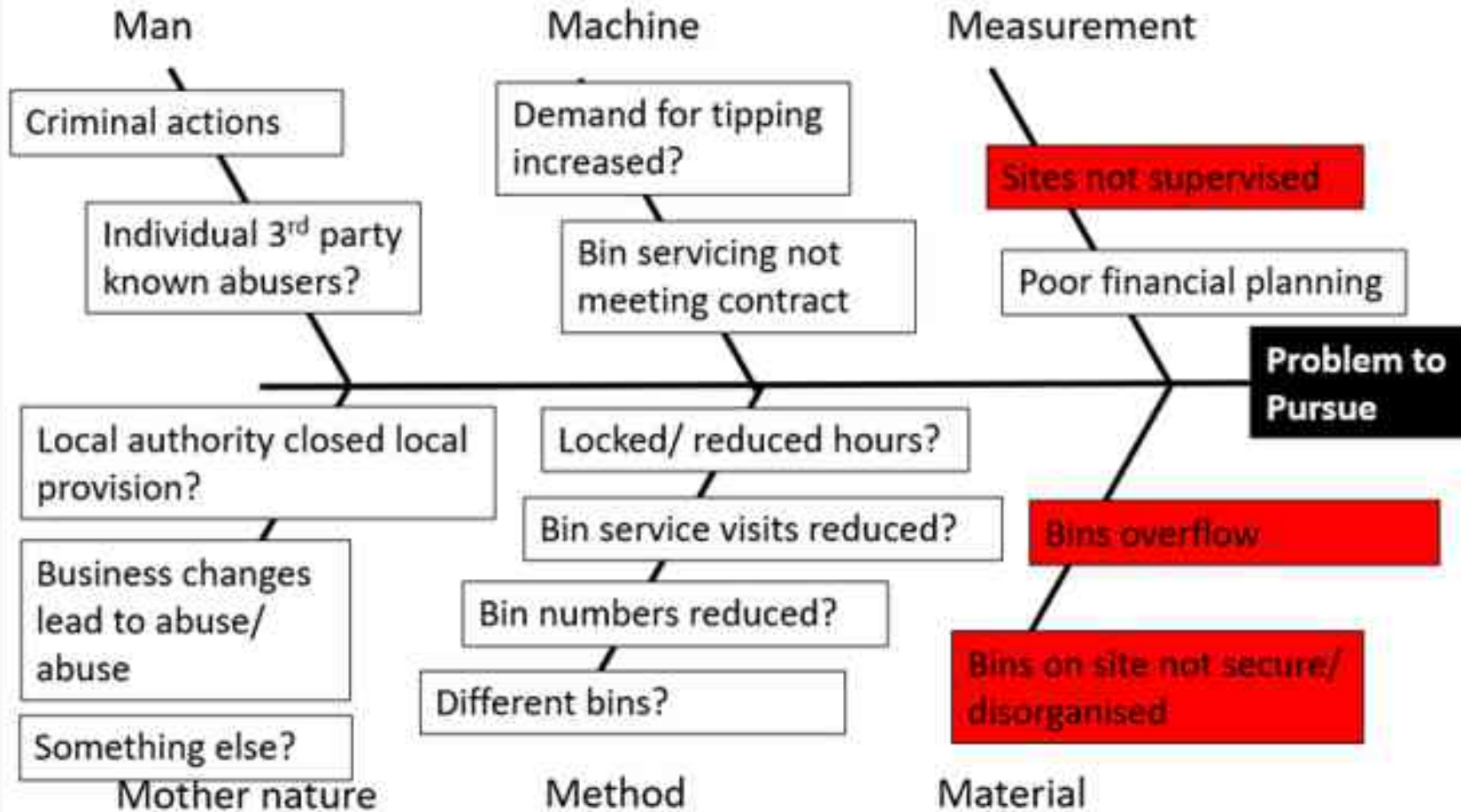


Characterising the problem - sites overflowing - general refuse and domestic improvements - why is this happening?

Is this what you think of as fly tipping?

7

Overflowing Bins at Copperfield Mill and Broadway Ave – Possible Causes



Broadway site only has 1 bin; site is not owned by Canal & River Trust, leased site; relationship with landlord is poor; high turnover of colleagues; no supervision checking of sites for fly-tipping as is not planned for the team to do it; no review of management information - wasted trip reports due to lack of manager's knowledge/inexperience; no local manager due to vacancy; 2 bins daily would meet demand

Coppermill; site is serviced 7 times a week - site design lends to overloading, security of bins not achievable.



**Canal &
River Trust**

Making life better by water

Actions we took

		Root Cause Countermeasures	
		Root Cause	Countermeasure Actions
1	No focus on budget		Introduce regular budget review & show data
			Briefing of local management
			Create focus on supervision of sites
			Publication of effectiveness of change
2	No focus on relationships		Local management education on importance with examples
			Meeting with Broadway site owners - follow up
			Implement site supervision Broadway - create trust
			Establish credibility - demonstration projects, show improvement
			Review of wasted trip reports
			Explanations with local team
	No physical actions to demonstrate changes		Upgrade bin store Coppermill, improve security
			Introduce CCTV monitoring
			Local team focus on removal of tipping before creates attraction

	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total
ay Avenue (Giffard Park)	£217.95	£2,768.55	£1,480.00	£1,685.50	£894.00	£1,863.50	£0.00	£0.00	£0.00	£894.00	£0.00	£0.00	£9,803.50
Mill Lane	£217.95	£1,718.55	£217.95	£1,630.05	£1,372.95	£894.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£6,051.45
Road, Bathampton	£1,100.00	£1,375.00	£1,100.00	£1,100.00	£550.00							£0.00	£5,225.00
ere Marina Sanitary Store	£705.90	£4,038.95					£532.00	£279.00	£245.00	£599.00	£50.00	£233.00	£6,682.85
Yard			£959.00		£2,915.05		£285.00		£527.00	£500.00	£111.00	£596.00	£5,893.05
	£2,241.80	£9,901.05	£3,756.95	£4,415.55	£5,732.00	£2,757.50	£817.00	£279.00	£772.00	£1,993.00	£161.00	£829.00	£33,655.85

mary



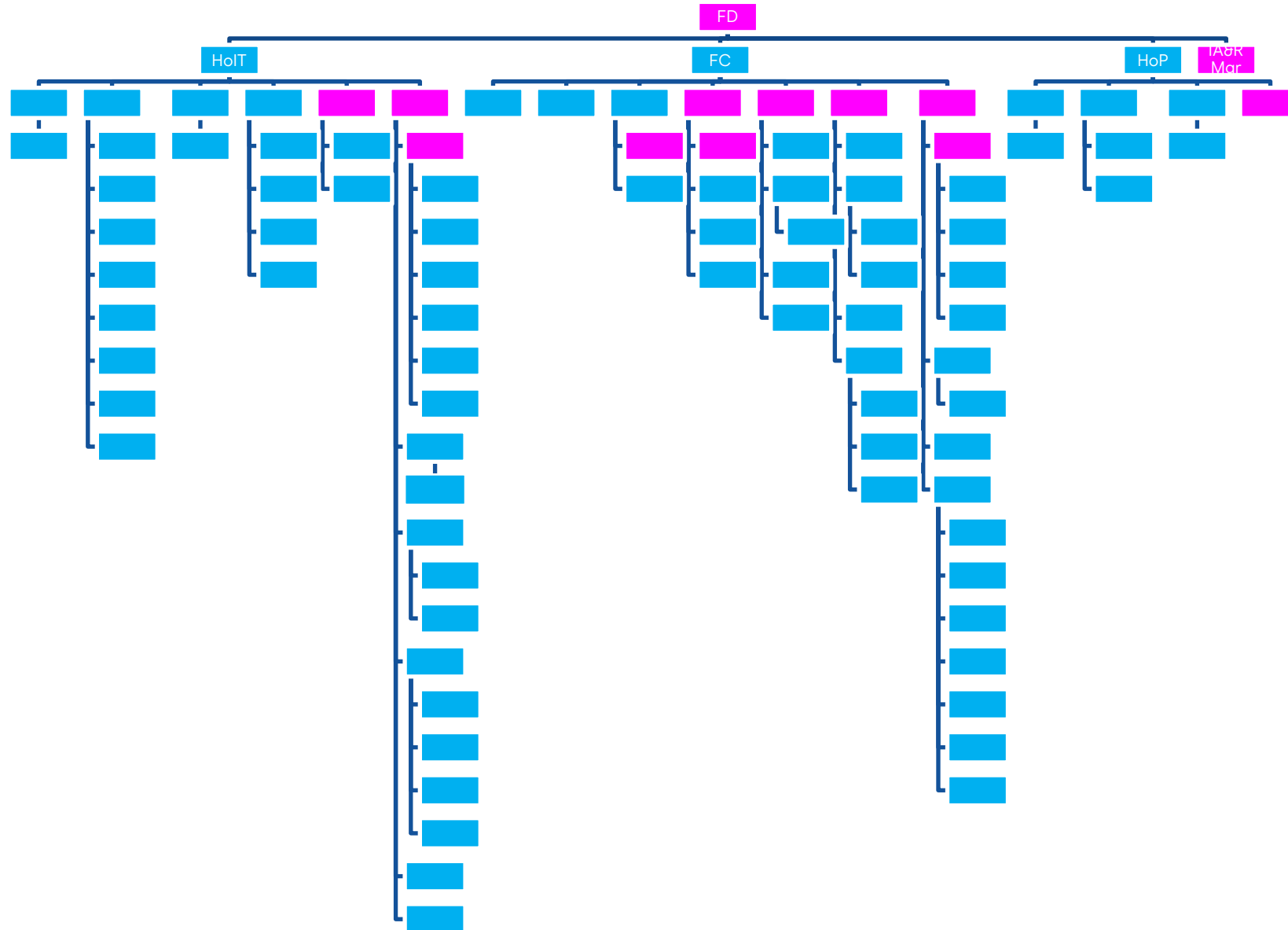
New installation at Coppermill live since beginning Feb 2023. Cost £7,600, local team action since Autumn '22. No flytipping reports since. Apparent payback in 13 months.

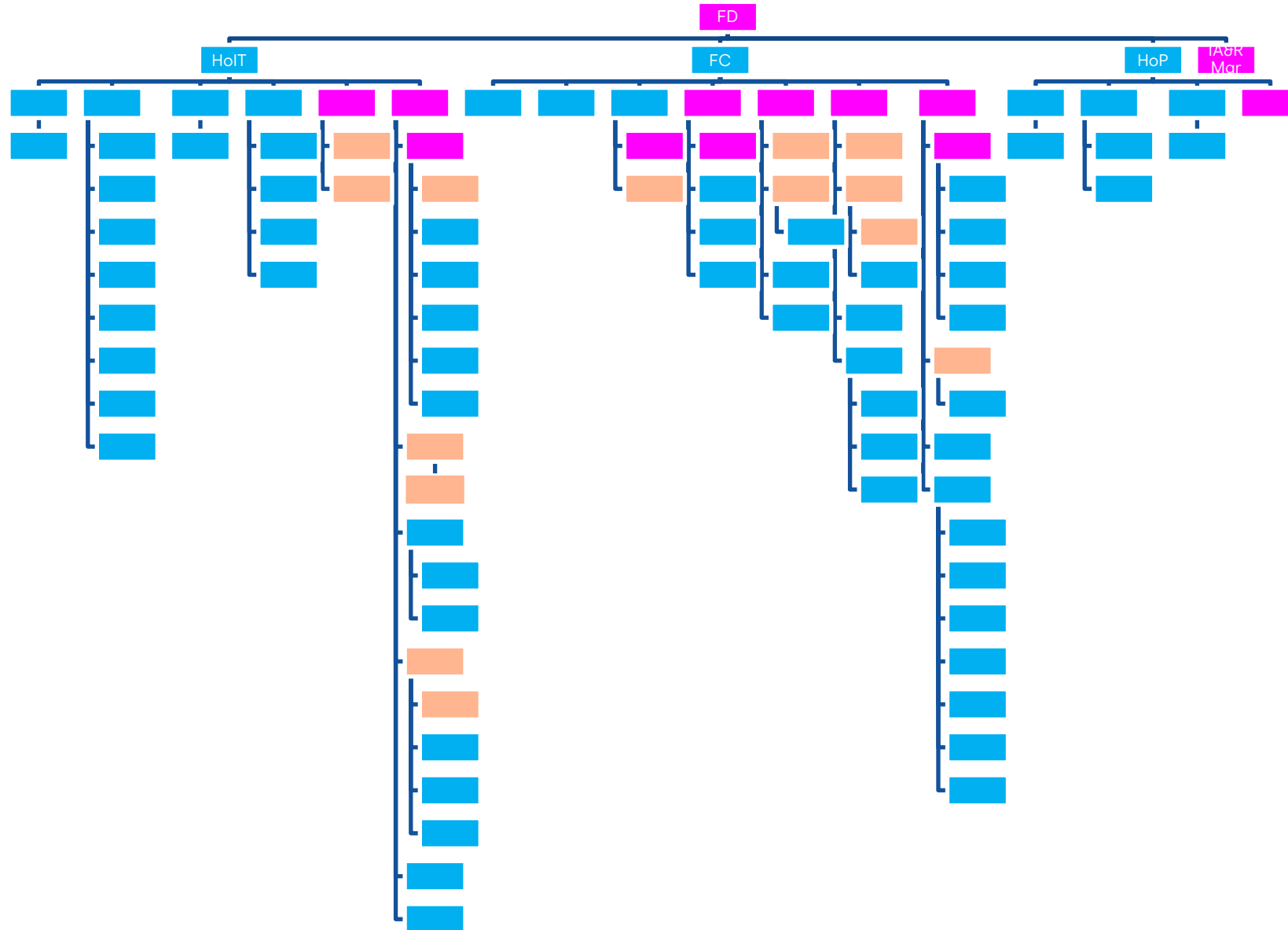


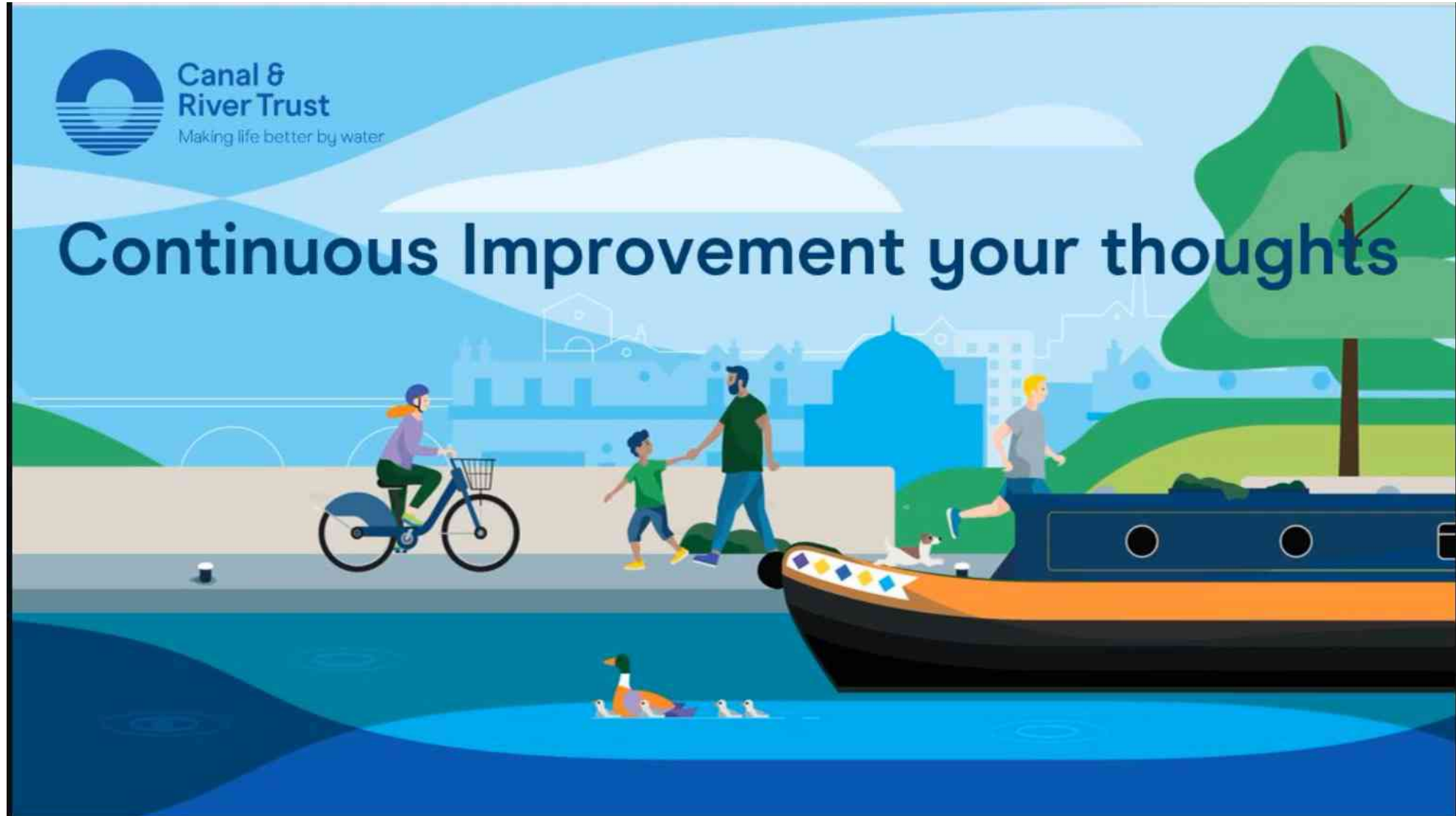
Local changes impacting cost profile is reduced from trend. Need to monitor Spring and Summer

8 STANDARDISE & SHARE

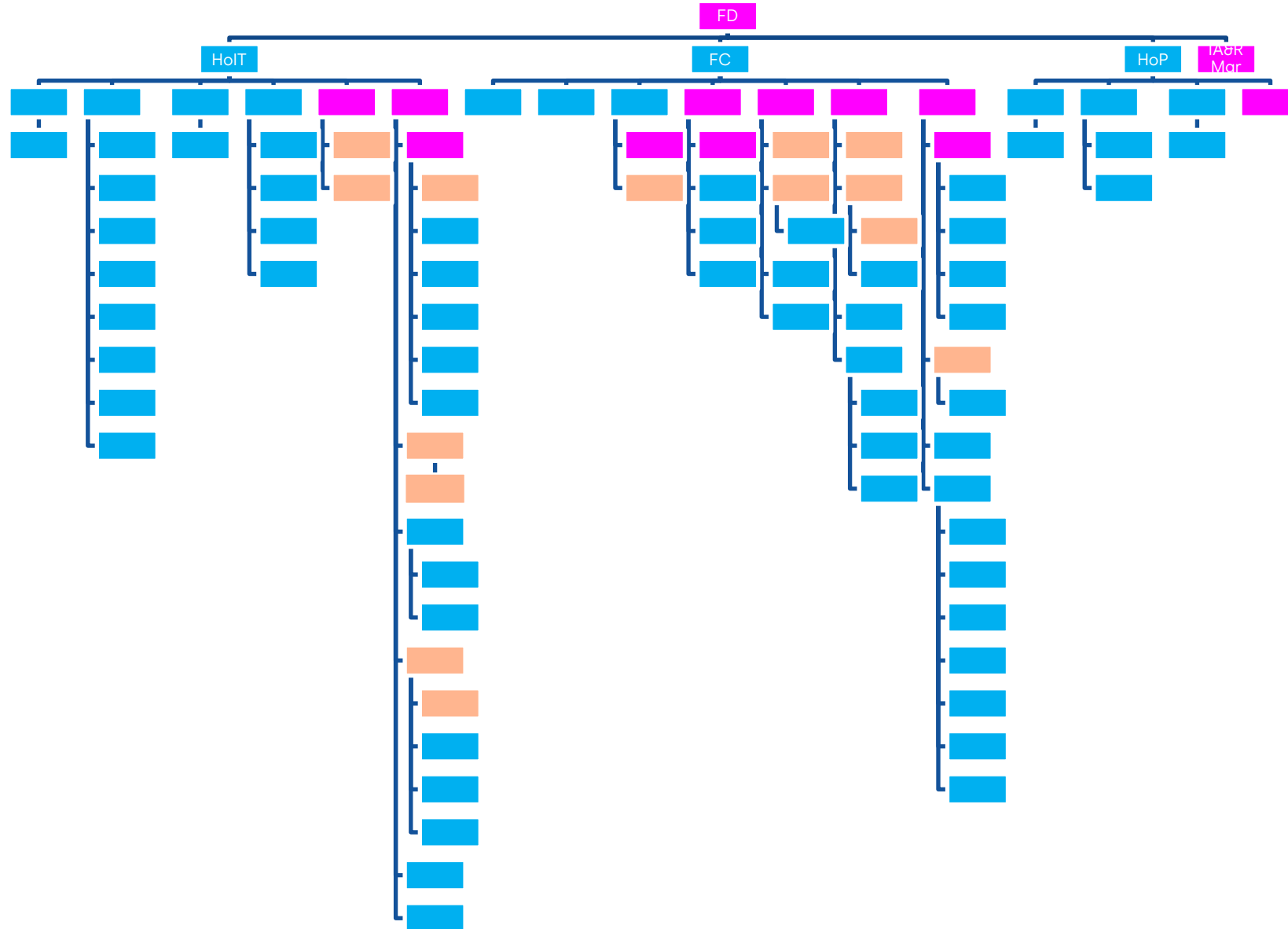
ARDISE



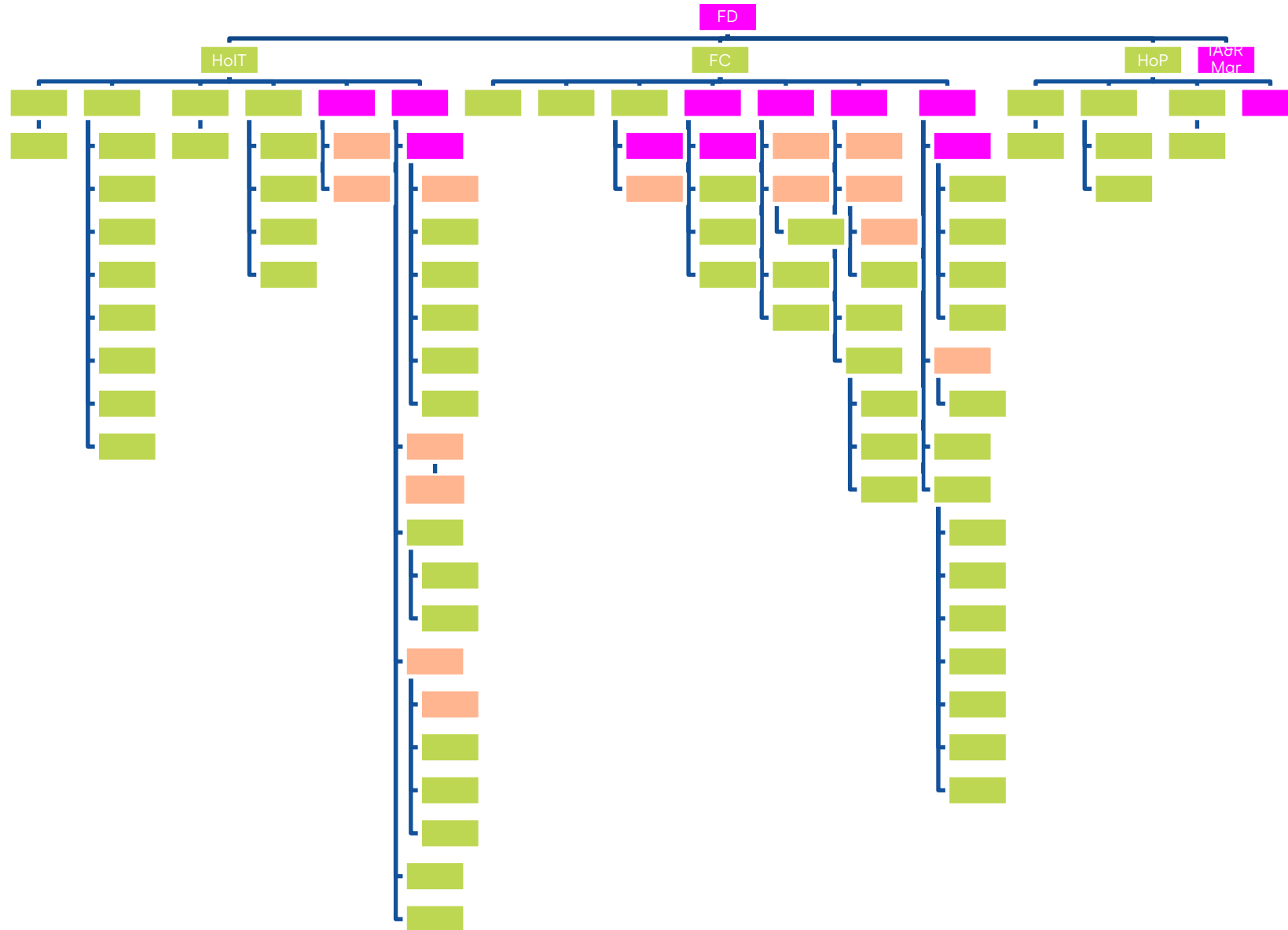




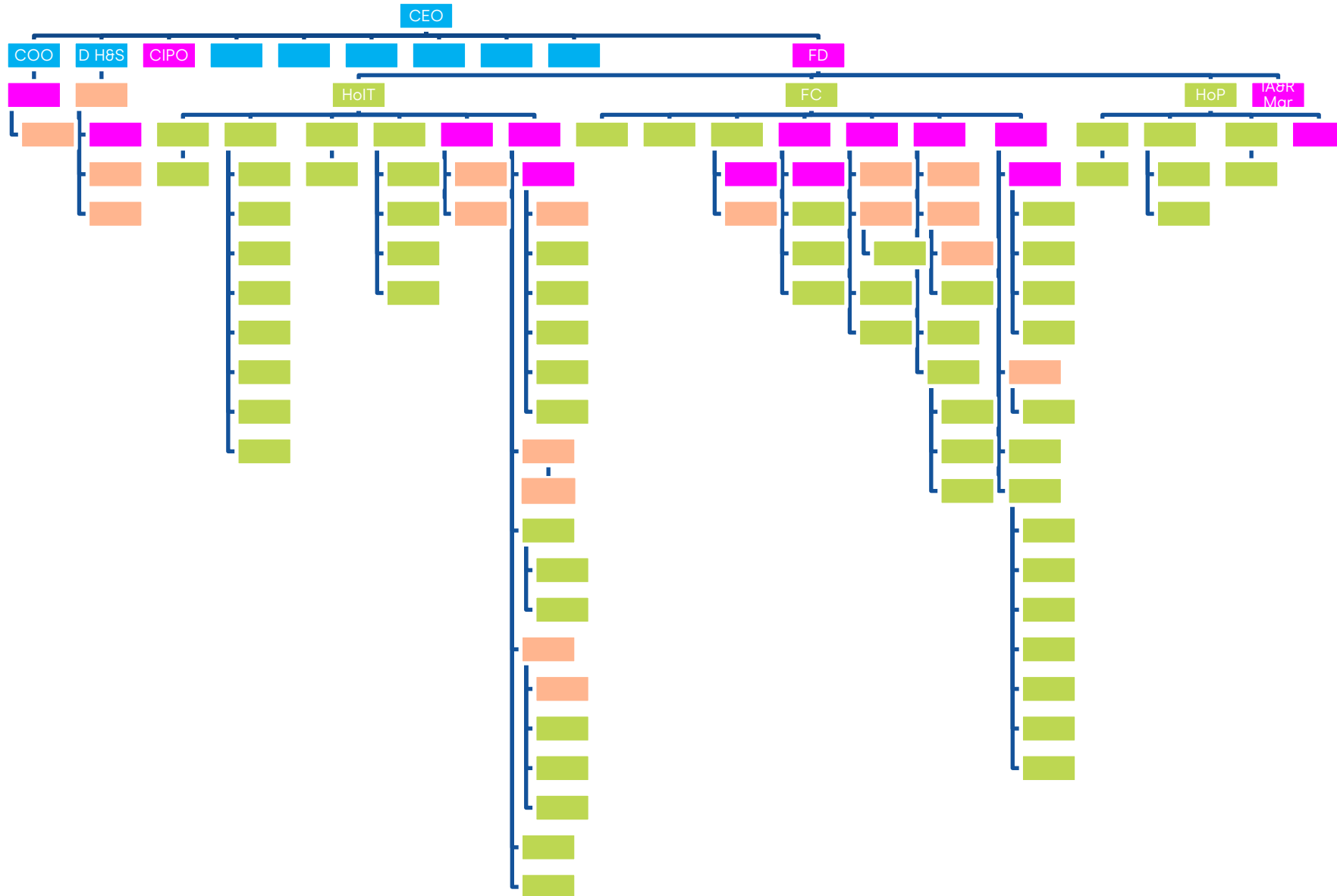
Where are we headed



Where are we headed



Where are we headed



“You don’t have to see the whole staircase, just take the first step.”

Martin Luther King Jr., I Have a Dream speech (1963)



