

4 Working towards service-line management: a toolkit for presenting

operational service-line data

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Introduction

▶ Introduction

Appendices

About service-line management

Service-line management (SLM) is a combination of trusted management and business planning techniques that can improve the way healthcare is delivered. It was developed by Monitor for NHS foundation trusts, drawing on evidence from UK pilot sites and the experience of healthcare providers worldwide.

By identifying specialist areas and managing them as distinct operational units, SLM enables NHS foundation trusts to understand their performance and organise their services in a way which benefits patients and makes trusts more efficient. It also enables clinicians to take the lead on service development and drive improvements in patient care.

SLM provides the tools to help trusts identify and structure service-lines within their organisation, ensuring clear paths for decision making and accountability. It also builds a framework within which clinicians and managers can plan service activities, set objectives and targets, monitor their service's financial and operational activity and manage performance.

SLM relies on the production of timely, relevant information about each service-line, to enable analysis of the relationship between activity and expenditure for each service-line as well as showing how each service-line contributes to the overall performance of the trust. It also encourages ownership of budgets and performance at service-line level. The first step to achieving the necessary level of detail is the move to service-line reporting (SLR).

About this guide

This document describes a range of service-line reporting (SLR) tools and shows how they can be used to present data about the performance of service-lines in targeted, standardised and consistent formats to encourage insightful performance discussions and informed decision making.

Reliable financial information about service-lines needs to be in place in order to use these tools. A guide to the implementation of service-line financial reporting, *Guide to developing reliable financial data for service-line reporting: defining structures and establishing profitability*, is also available on Monitor's website, and implementation must be underway before this toolkit can be used. However, customisation of the different tools can begin before the work on financial reporting is completed.

The toolkit is made up of six analysis tools, each of which can be used independently or in various combinations to create a "toolkit journey".

For each tool, this guide explains

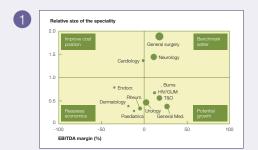
- its purpose
- how to discuss the reports generated;
- what action to take as a result of using the tool;
- implementation hints and tips;
- adapting the tool to suit trusts' needs;
- the different levels of analysis that can be undertaken; and
- examples of how the tools have been successfully used in pilot trusts.

In addition, there is a case study of how one trust harnessed the full power of the toolkit by developing a "toolkit journey" to gain a new and insightful understanding of their cost base. This illustrates the power of introducing these tools to drive decision-making.

An example workplan has been developed for implementing this toolkit. With the right management support and focus, this should take no more than two months, after which a trust's decision making abilities will be greatly enhanced.

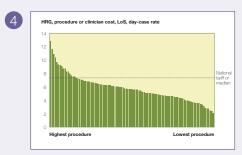
The toolkit consists of six standalone tools

They can be used independently or combined to create greater insight



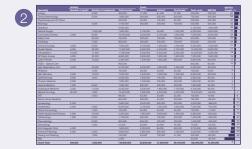
Portfolio matrix

A portfolio analysis tool for priority setting and strategy development



Variance analysis

Ad hoc reports to identify outliers in performance. e.g. Length of stay (LoS), day-case rates, costs



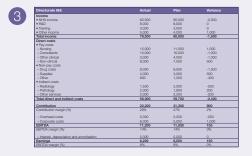
EBITDA table

A comparison table for key financial metrics



Cost matrix

A detailed breakdown of costs by cost-line and cost-centre



Detailed income and expenditure (I&E)

A detailed breakdown of income and expenditure for a directorate, service-line, point of delivery (POD) or healthcare resource group (HRG)



Forecast model

The population and use of a model to forecast five-year performance at the serviceline and POD level. Used for sensitivity and 'what if?' analysis

Improving decision making

The tools will help create a structure in which the right decisions are made at the right level of the trust

	In-year performance	Strategic decisions
Trust	What should we focus on to drive current performance?	 What is the strategy for the trust? When will the trust be able to afford to invest in a major capital programme? (e.g. a new building)
Directorate/ Division	What actions are needed to hit budget/target?Who will be accountable for what?	How should the shape of the portfolio change in the next five years?
Service-line	Where should we focus our improvement efforts?What performance levels should we target?	 Which service-line should we invest in? What resources are required to deliver the service we aspire to provide?
Healthcare resource group (HRG)	What actions should we take to improve the profitability of HRG X?	
Patient level	 Are there any patient categories we are under serving? Which clinicians need to change their working practices? 	

Informing performance and strategy discussions

This toolkit will help boards, managers and clinicians to discuss in-year performance and long-term strategy constructively

	From	То				
Ollistations	"Finance just don't understand how important it is to add more staff"	"Adding another consultant will cost £X, but the extra volume will cover these costs and generate a contribution of £Y to the trust"				
Clinicians	 "All these targets about day-case rate and LoS are unrelated to anything for patients" 	 "Driving up the day-case rate to X% has liberated enough cash for us to fund investment in additional imaging sessions to allow same day assessment for breast cancer" 				
	"Our agency nursing costs have increased"	"We've treated X% more patients than				
Managers		planned, which has caused higher usage of agency nurses"				
iviai iagei s	"Our clinical supplies costs are under budget"	 "Our case mix has changed and we are performing treatments that require less expensive supplies/devices" 				
Poordo/CEOo	 "We do not know which service-lines to focus on in order to achieve financial balance" 	 "We need to invest in building cardiac referrals since this is our most profitable service and we can build distinctiveness in it" 				
Boards/CEOs		 "We choose to maintain world-class liver facilities, even though we incur losses in more complicated procedures" 				

Four characteristics of effective performance reports

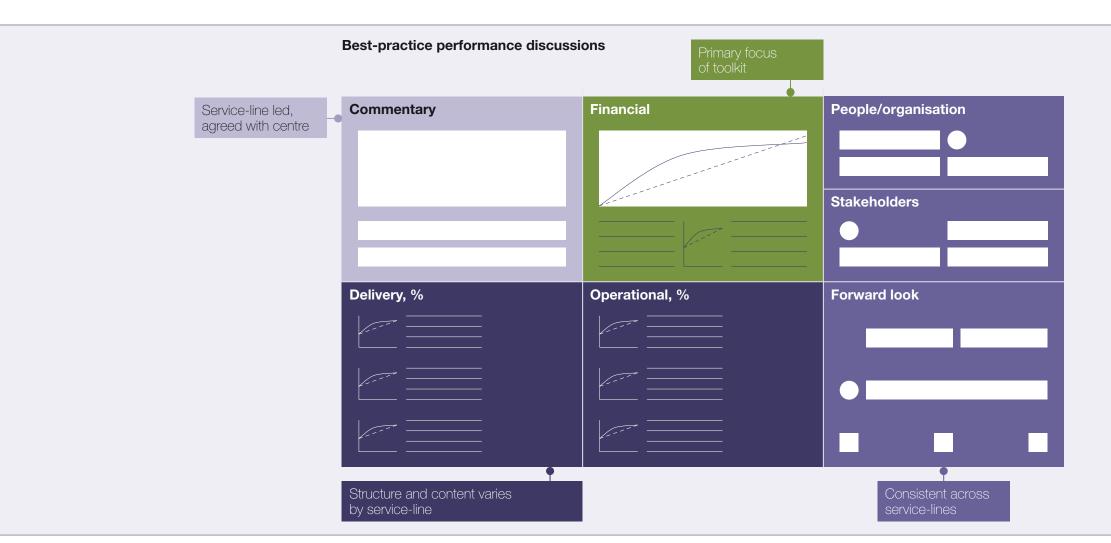
The tools encompass the following four key characteristics of effective performance reports:

- Targeted towards the conversation required
- 2 Linked up and standardised
- Appropriate coverage and content
- Supported by consistent, defined data and processes

- Report design based on desired conversation
- Sufficient depth to provide insight, but not unnecessary detail
- Easy to read formats to support conversations
- Reporting is connected throughout the organisation to allow drill-down of performance indicators
- Reporting is consistent (i.e. across service-line) to allow comparison of data and to allow aggregation for a trust's performance perspective
- Balance of indicators to best assess historic performance and future health
- Used in conjunction with reports containing outcome, input, output and throughput measures
- Clear definition of data and ownership (e.g. toolkit customised by clinicians and general managers with help from finance department; overall process for populating them is coordinated by finance department; completed reports owned by individual service-lines)
- Aligned reporting processes ensure timely data and reduce burden of reporting (e.g. for service-lines) and correspondence (e.g. for the board)
 - Alignment of formats, processes, timing
 - Clearly defined data flows (i.e. reporting by exception, appropriate circulation)

Seeing financial data in a wider context

The toolkit is financially focused, but should be used within a wider performance context



Changing behaviour

In order for the tools to be used effectively, mindsets and capabilities need to be explicitly addressed

Culture and role models

'I see my superiors and colleagues behaving in a new way'

- The board and senior managers use SLR to ask questions and make key decisions
- The toolkit should be used at all levels in the organisation

Hospital team

Understanding and conviction

'I know what is expected of me and I agree with it'

- Develop and share the 'change-story': why you are introducing SLR
- Service-line mangers may need to be reviewed

Right people with right skills

'I have the necessary knowledge and skills to do my job well'

- Service-line leadership and organisation structure may need to be adjusted
- A training programme needs to be developed to roll out the toolkit

Systems and processes

'Structures, processes and systems drive and support the changes I need to make'

- Budget development and financial management processes will need to be revised
- Target levels of service-line performance should be agreed and written into contracts
- Performance should be tracked across a balanced set of measures

The six standalone tools

▶ The six standalone tools

Appendices

This section provides detailed guidance on the tools and their implementation





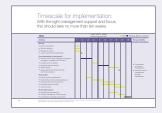
- In-depth description of each tool
- Examples of how it was successfully used in the pilot trusts

Example 'toolkit journey'



• Case study of how one trust harnessed the toolkit to achieve a new and insightful understanding of their cost base

Implementation plan



• An example workplan has been developed for implementing this SLR toolkit in your trust

<u>Appendices</u>



- Glossary of terms
- Guide to the forecast model
- Sample reports

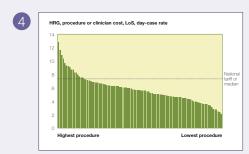
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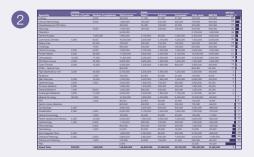
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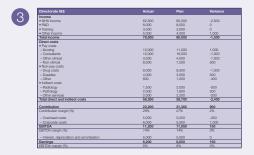
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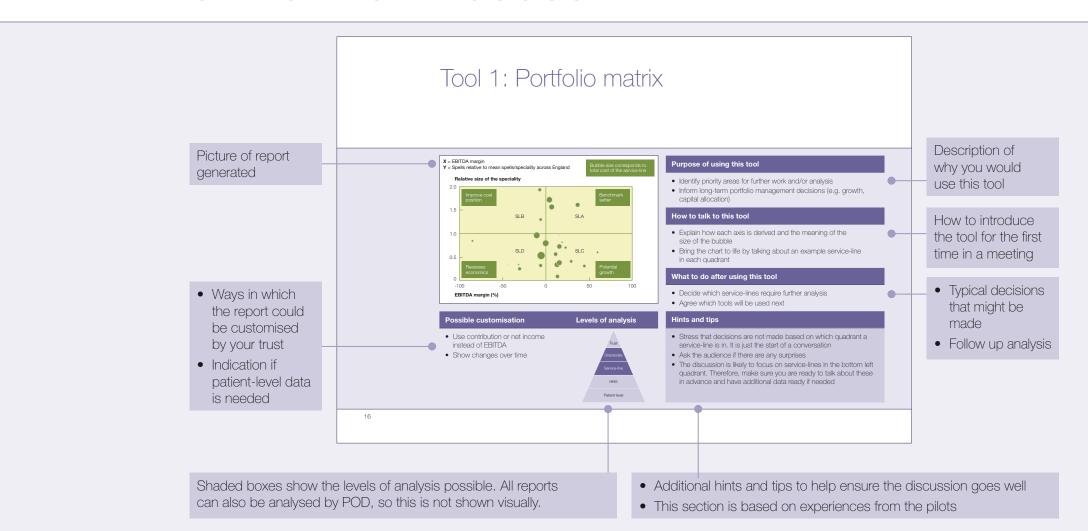
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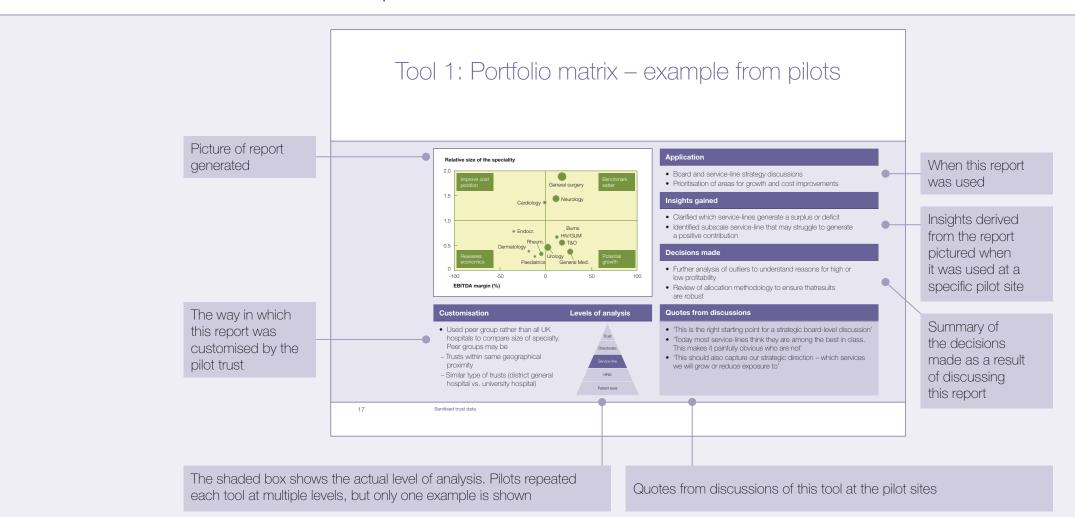
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Each tool is presented on two pages – the first page provides guidance on how to introduce it...



...the second page describes an example of how it was successfully used in a pilot trust



Tool 1: Portfolio matrix



Possible customisation

- Use contribution or net income instead of EBITDA
- Show changes over time

Levels of analysis



Purpose of using this tool

- Identify priority areas for further work and/or analysis
- Inform long-term portfolio management decisions (e.g. growth, capital allocation)

How to talk to this tool

- Explain how each axis is derived and the meaning of the size of the bubble
- Bring the chart to life by talking about an example service-line in each quadrant

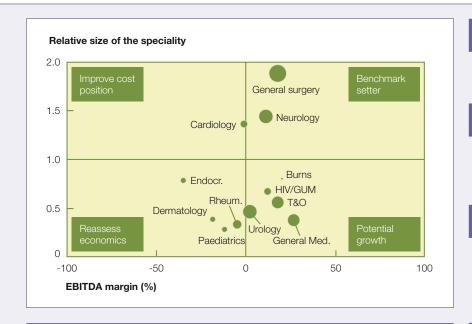
What to do after using this tool

- Decide which service-lines require further analysis
- Agree which tools will be used next

Hints and tips

- Stress that decisions are not made based on which quadrant a service-line is in. It is just the start of a conversation
- Ask the audience if there are any surprises
- The discussion is likely to focus on service-lines in the bottom left quadrant. Therefore, make sure you are ready to talk about these in advance and have additional data ready if needed

Tool 1: Portfolio matrix – example from pilots



Customisation

- Used peer group rather than all UK hospitals to compare size of specialty. Peer groups may be:
- Trusts within same geographical proximity
- Similar type of trusts (district general hospital vs. university hospital)

Trust Directorate Service-line HRG

Patient level

Levels of analysis

Application

- Board and service-line strategy discussions
- Prioritisation of areas for growth and cost improvements

Insights gained

- Clarified which service-lines generate a surplus or deficit
- Identified subscale service-line that may struggle to generate a positive contribution

Decisions made

- Further analysis of outliers to understand reasons for high or low profitability
- Review of allocation methodology to ensure that results are robust

Quotes from discussions

- 'This is the right starting point for a strategic board-level discussion'
- 'Today most service-lines think they are among the best in class. This makes it painfully obvious who are not'
- 'This should also capture our strategic direction which services we will grow or reduce exposure to'

Tool 2: EBITDA table

	Number	Number		Costs			Total	EBITDA	
Service-line	of spells/ bed-days	of out- patients	Revenue £000s	Direct £000s	Indirect £000s	Overhead £000s	EBITDA £000s	margin %	% change in activity
ΠU	X	Х	×	Х	X	Х		X	
Pain manag.	X	X	X	X	X	X		X	
Palliative med.	X	X	X	Х	X	X		X	
GUM	X	X	X	X	X	X		X	
HIV	X	X	X	Х	X	X		X	
A&E	X	X	X	Х	X	X		X	
Cardiology	X	X	X	X	X	X		X	
Care of the elderly	х	×	×	Х	×	×		х	
Clinical haematology	Х	×	×	Х	×	×		Х	
Dermatology	X	×	×	Х	X	×		X	
Endocrinology	Х	×	×	Х	X	×		X	
Gastroenterol.	Х	X	X	Х	X	Х		X	
Medical oncology	Х	×	×	Х	×	×		Х	
Neurology	X	×	X	Х	X	×		X	
Rheumatology	X	×	×	Х	X	×		X	
Thoracic med.	X	×	X	×	×	X		X	
Burns	X	X	X	X	X	X		X	
Gen. surgery	Х	X	X	Х	X	X		X	
Ophthalmology	Х	X	X	Х	X	X		X	
Plastics	X	X	X	Х	X	×		X	
T&O	Х	X	X	Х	X	×		X	
Urology	X	Х	×	Х	×	X		X	
All paediatrics	X	X	X	Х	X	X		X	
Gynaecology	Х	X	X	Х	X	X		X	
Obstetrics	Х	Х	Х	Х	Х	Х		Х	

Possible customisation

- Show additional changes over time and/or forecasts
- Include variance against plan
- Break down revenue and costs at a lower level of detail



Levels of analysis

Purpose of using this tool

- Identify differing performance between service-lines
- Uncover drivers of variance in performance
- Complement the portfolio matrix

How to talk to this tool

- At the start of the conversation, make sure everyone in the room is comfortable with the definitions used
- Try to keep the debate focussed on outliers of performance rather than talking about every number on the page

What to do after using this tool

- Decide which service-lines require further analysis
- Agree which tools will be used next

Hints and tips

- Know your audience work out in advance what they are likely to be interested in, and customise the table for them (i.e. in-year performance, comparisons against plan and/or changes over time)
- Circulate the tables beforehand and ask people to come to the meeting with questions
- Order the table by EBITDA margin to make it easier to pick out outliers in performance

Tool 2: EBITDA table – example from pilots

	Activity			Costs					EBITDA
Speciality	Number of spells	Number of outpatients	Total income	Direct	Indirect	Overheads	Total costs	EBITDA	margin (%)
Urology		3,000	300,000	71,000	61,000	37,000	200,000	200,000	67
Clinical Haemotology		5,000	1,600,000	300,000	300,000	200,000	700,000	900,000	56
Physiotherapy-led OP Clinics			400,000	35,000	100,000	52,000	200,000	200,000	50
Neurology		4,000	1,100,000	200,000	200,000	100,000	500,000	500,000	45
Obstetrics			5,000,000				3,100,000	1,800,000	36
General Surgery		1,500,000	7,900,000	4,100,000	46,000	1,200,000	5,300,000	2,600,000	33
Community Dentistry	4,000	8,000	10,000,000	3,300,000	2,100,000	1,500,000	7,000,000	3,000,000	30
Elderly Care		30,000	700,000	300,000	100,000	100,000	500,000	200,000	29
Cardiology		7,000	900,000	200,000	300,000	100,000	600,000	200,000	22
Clinical Oncology	2,000	5,000	7,000,000	3,100,000	1,200,000	1,200,000	5,500,000	1,500,000	21
Private Patients	5,000	26,000	17,500,000	5,600,000	5,300,000	3,100,000	14,000,000	3,600,000	21
Orthopaedics	10,000	17,000	17,800,000	5,000,000	6,400,000	3,200,000	14,500,000	3,200,000	18
GP Direct Access	4,000	32,000	8,900,000	3,800,000	1,900,000	1,600,000	7,300,000	1,600,000	18
Cystic Fibrosis	2,000	12,000	4,300,000	1,500,000	1,600,000	800,000	3,900,000	500,000	12
SCBU - Special Care			900,000				800,000	93,000	10
High Dependancy Unit	3,000	40,000	5,700,000	2,200,000	1,900,000	1,200,000	5,300,000	400,000	7
Pediatrics		1,000	100,000	46,000	40,000	24,000	100,000	6,000	6
A&E Attenders	2,000	14,000	7,200,000	3,400,000	1,900,000	1,500,000	6,800,000	400,000	6
Ophthalmology	3,000	4.000	3.000.000	1,600,000	700,000	600,000	2,900,000	95.000	3
Thoracic Medicine	2,000		1,900,000	1,200,000	300,000	400.000	1,900,000	49.000	3
General Medicine	1,000	9.000	1,500,000	800,000	400,000	300,000	1,500,000	35,000	2
Audiological Medicine	3,000	11,000	5,200,000	2,200,000	1,800,000	1,100,000	5,100,000	90,000	2
Medical Oncology	92,000	1,000	15,200,000	7,600,000	4,300,000	3,400,000	15,300,000	-82,000	-1
ENT		1.000	98.000	53.000	28,000	23.000	100.000	-6,000	-6
Genito Urinary Medicine			600.000	500.000	43,000	200.000	700,000	-59.000	-10
Gynaecology	2.000		3,600,000	2.500.000	600,000	900,000	4.000.000	-388,000	-11
Anaesthetics	2,000	4.000	6.500,000	4,100,000	1,500,000	1,600,000	7,200,000	-703,000	-11
Clinical Immunology		1,000	100,000	55,000	53,000	30,000	100,000	-11,000	-11
Patient Appliances/Orthotics	4.000	13.000	5.200.000	1,900,000	2,600,000	1.300.000	5,800,000	-633,000	-12
Opthamology	1,000	2.000	1,100,000	900.000	100,000	300.000	1,300,000	-239.000	-22
Rheumatology		6.000	800,000	600,000	300,000	300,000	1,200,000	-333,000	-42
Dermatology		1,000	51,000	22,000	35,000	16.000	74.000	-22.000	-40
Anti-Coagulant Clinic	4,000		1,800,000	2,000,000	86,000	600,000	2,700,000	-859,000	-48
Chemical Pathology	2,000	2.000	2,800,000	2,800,000	600,000	1.000.000	4,400,000	-1.569.000	-56
Training and Teaching	,	1,000	100,000	40.000	100,000	41.000	200,000	-80.000	-80
R&D			3.000	.,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	23,000	-20,000	
Grand Total	200.000	1.800.000	146,900,000	65.800.000	37,600,000	29.100.000	136,400,000	10,400,000	7

Customisation

- Private patients, teaching, training and R&D are treated as separate specialties
- Did not look at historical information.

Levels of analysis



Application

• Discussions within the finance team before sending out to a wider audience

Insights gained

- Identification of the specialties which are profitable
- Realisation that there were 14 specialties which were loss making

Decisions made

- Conduct a finer analysis of loss-making specialties
- Explore whether surgical specialties are being allocated more than their fair share of revenues

Quotes from discussions

- 'I didn't realise this specialty was losing money – and it's only going to get worse as we expand. We should definitely keep this in mind in our discussions with PCTs'
- 'A&E is growing we need to focus on this to make it as profitable as we can'

Tool 3: Detailed income and expenditure

Directorate, Service-line, POD or HRG	Actual	Plan	Variance	Commentary
Income				
Tariff income	Х	X	X	-
Non-tariff income	X	X	X	-
Non-NHS clinical income	X	X	X	-
Other income	X	X	X	-
Total income	Х	Х	Х	-
Direct costs				
Direct pay costs				
- Nursing	X	X	×	-
- Consultants	X	X	X	-
- Other clinical	X	X	X	-
- Non-clinical	X	X	×	-
Non-pay costs				
- Drug costs	X	X	×	-
- Supplies	X	X	X	-
- Other direct costs	Х	X	X	-
Indirect costs				
 Allied healthcare professionals 	X	X	×	-
- Radiology	X	X	×	-
- Pathology	X	X	X	-
- Theatre	X	X	X	-
- Other services	X	X	X	-
Total direct and indirect costs	х	X	х	-
Contribution	х	X	X	
Contribution margin (%)	Х	Х	x	
Overhead costs				
Site costs	X	X	X	-
Corporate costs	Х	X	X	-
EBITDA	х	X	Х	
EBITDA margin (%)	х	Х	Х	
Interest, depreciation and amortisation	х	Х	Х	-
Earnings	X	X	x	_

Possible customisation

- Compare over different time periods (e.g. previous year)
- Break down costs and revenue differently and/or to greater degree



Levels of analysis

Purpose of using this tool

- Understand reasons behind variance against plan
- Identify areas for improvement
- Enhance understanding of the key drivers of EBITDA performance

How to talk to this tool

- Begin by ensuring that the definitions of each of the cost lines are understood
- Ideally, the general manager or lead clinician should be leading this discussion

What to do after using this tool

- Identify areas for further analysis
- Agree frequency at which you will review these reports

Hints and tips

- Getting general managers and clinicians to jointly fill out the commentary section prior to the meeting will greatly enhance the quality of the discussion
- Be sure that you know where non-PbR costs and revenues sit (e.g. R&D, training, private patients)

Tool 3: Detailed income and expenditure – example from pilots

Directorate I&E	Actual	Plan	Variance
Income			
NHS income	62,500	65,000	-2,500
• R&D	8,000	8,000	0
Training	3,000	3,000	0
Other income	5,000	4,000	1,000
Total income	78,500	80,000	-1,500
Direct costs			
Pay costs			
- Nursing	12,000	11,000	1,000
- Consultants	15,000	16,000	-1,000
- Other clinical	3,000	4,000	-1,000
- Non-clinical	8,000	7,500	500
Non-pay costs			
- Drug costs	8,000	9,500	-1,500
- Supplies	4,000	3,500	500
- Other	800	1,200	-400
Indirect costs			
- Radiology	1,500	2,000	-500
- Pathology	2,000	1,800	200
- Other services	2,000	2,200	-200
Total direct and indirect costs	56,300	58,700	-2,400
Contribution	22,200	21,300	900
Contribution margin (%)	28%	27%	2%
- Overhead costs	5,000	5,250	-250
- Corporate costs	6,000	5,000	1,000
EBITDA	11,200	11,050	150
EBITDA margin (%)	14%	14%	0%
- Interest, depreciation and amortisation	5,000	5,000	0
Earnings	6,200	6,050	150
EBITDA margin (%)	8%	8%	0%

Customisation

- Separated out corporate and overhead costs to increase the focus on economising space
- Broke out R&D and training from clinical activity



Levels of analysis

Directorate

Service-line

HRG

Patient level

Application

• Will be used in the future as the basis for budgeting and planning

Insights gained

- Nursing costs are above plan despite activity being lower than expected
- Large variances in drug costs have helped contribution remain above plan, but it is not known why this favourable variance has occurred

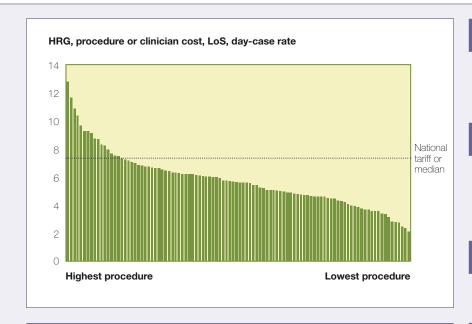
Decisions made

- Review of drivers behind variances, particularly in NHS income, nursing and drug costs
- Repeat analysis for each service-line

Quotes from discussions

- 'The more understanding of variance vs. plan the better... I want this weekly'
- 'We have never had this level of transparency this would enable us to act as a business'
- 'This would enable me to communicate with clinicians how we perform as a service-line'

Tool 4: Variance analysis



Possible customisation

- Customise for HRG, procedure or clinician
- Produce for various metrics such as cost, average length of stay (ALoS) or day-case rate

Levels of analysis



Purpose of using this tool

- Identify outlying HRGs, procedures or clinical practices
- Understand reasons for variance
- Identify ways to reduce this variance

How to talk to this tool

- Begin by explaining why you have undertaken this analysis
- Use this tool as a jumping-off point for more detailed analysis rather than a standalone discussion

What to do after using this tool

 Look at the causes behind variances by examining individual procedures

Hints and tips

- Be sure to acknowledge that some variance is to be expected and that there may be very good reasons for it (e.g. clinical necessity, coding errors)
- Highlight areas you would like to talk about by using different coloured bars
- If you are discussing individual clinician performance, make sure you do not sound confrontational

Tool 4: Variance analysis – example from pilots



Customisation

• Colours to highlight different lengths of stay

Levels of analysis

Trust
Directorate
Service-line
HRG
Patient level

Application

• Detailed discussion of the profitability of an individual HRG

Insights gained

- This HRG is always unprofitable at these lengths of stay
- Costs for individual procedures vary greatly despite having the same length of stay

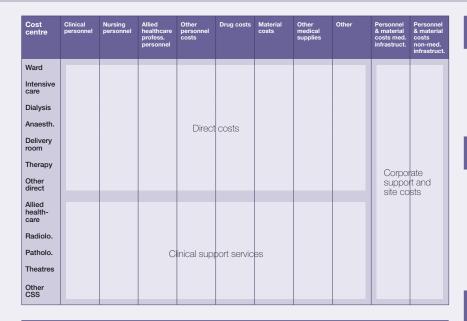
Decisions made

- Review individual cases to understand what was driving these differences in costs and whether there were any coding errors
- Explore the drivers of cost in more detail to understand how, even with the same length of stay, there was more than a two-fold variance in costs

Quotes from discussions

- 'We have undertaken analysis in the past using Dr Foster on LoS which proved very useful. But doing this on costs brings totally different insights'
- 'This only works if you have a degree of control over the reasons behind the variances, this isn't always the case. We need to understand this better'
- 'Can this really be costs for the same HRG? Perhaps there are coding issues? We need to do some more analysis on this'

Tool 5: Cost matrix



Possible customisation

- Compare over different time periods (e.g. previous year)
- Break down costs and revenue differently and/or at a greater level of detail

Levels of analysis



Purpose of using this tool

- Identify the key underlying drivers of costs
- Help to understand the reasons behind variances in costs for the same HRG with the same LoS
- Identify areas for improvement

How to talk to this tool

- Start by explaining how the matrix combines cost lines and cost centres
- Circulate matrices beforehand and/or give people time to look at the charts before discussing implications
- Do not go through each number, but highlight the key areas for discussion

What to do after using this tool

• Identify areas for improvement and develop plans

Hints and tips

- Before sharing this analysis, be sure you can explain what allocation rules have been used to derive each number on the matrix
- Make sure the cost centres mirror your organisation's design

Tool 5: Cost matrix – example from pilots

Patient 1	Salaries a	ind wages					Non pay								
	Nurse	Medical	Medical tech	Allied health	Admin	Other	Blood	Drugs	Path	Prosthe- sis	Medical supplies	Hotel	Overhead	Capital charge	Total
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Direct costs	150	70			15	5		5			10	20	150	50	470
Allied health				20											20
Pathology				4			50		100		50		10		214
Radiology															
Theatres	250	150	40					20	5		10	5	100	30	610
Overhead															
Other indirect costs															
Total	400	220	40	24	15	5	50	25	105		70	25	260	80	1,314
											<u> </u>			<u>'</u>	
	OP Mins Anaesthetic Mins		Recover M	lins	Time on war	d (days)									
	25		40		50		1.2								

Insights gained

- Understanding of the magnitude of different costs for this procedure
- Identification of the importance of theatre time as a driver of costs

Customisation

Levels of analysis

- Broke down cost base so better aligned with internal structure
- Included operational data on the time in theatre and wards



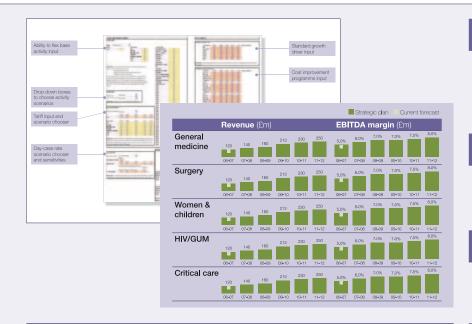
Decisions made

- Review of theatre productivity
- Investigate coding accuracy

Quotes from discussions

- 'This level of information has never been available before. It would be great if we had this'
- 'At last I will be able to understand what is truly driving my costs'

Tool 6: Forecast model



Possible customisation

- This model is an example of the type needed. You may already have a tool you would prefer to use or wish to develop one of your own
- The model is designed to allow increased customisation as the user's knowledge increases

Levels of analysis



Purpose of using this tool

- Produce five-year forecasts and facilitate sensitivity and 'what if' analysis
- Generate the data needed to populate reports from other tools with forecast data
- Forecast implications of the strategic plan

How to talk to this tool

- Explain rationale behind the forecast
- Focus on input needed from each directorate and/or assumptions for sensitivities

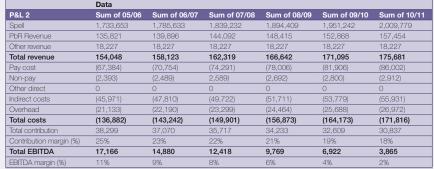
What to do after using this tool

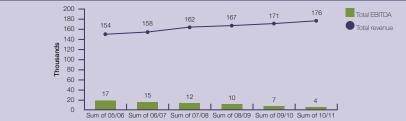
- Adjust strategic plan based on this analysis
- Follow up with directorates to develop detailed plans for the coming year

Hints and tips

- Read Appendix B Guide to the forecast model before using the model provided
- One person needs to ensure that all input and assumptions are clearly catalogued
- Be vigilant with version control to ensure that you can keep track of different scenarios
- Set up a base scenario which you can revert to easily once sensitivities have been run

Tool 6: Forecast model – example from pilots





Customisation

Forecast based on 2005/2006 data

- Liptorical transa for comparison
- Historical trends for comparison



Levels of analysis

Application

• Used 2005/2006 data to forecast at the service-line level for five years

Insights gained

The trust lacks reliable cost driver data

Decisions made

- Increase quality of data around current income and cost
- Consider whether renewing certain local price contracts is feasible given predictions of cost increases

Quotes from discussions

- 'I like the day-case rate variability it's not something we had modelled before'
- 'I'm not sure we would use all the bespoke elements, but it's good to have the option of using them in some specialties'

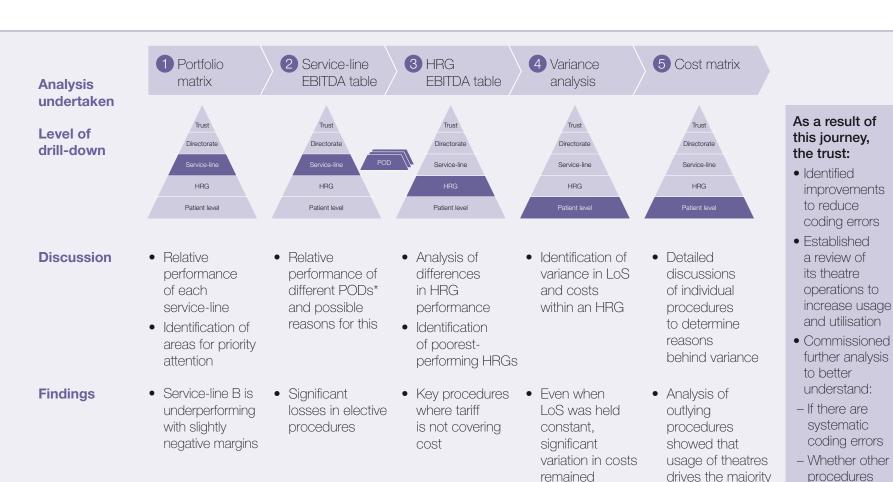
Example use of toolkit

▶ Example use of toolkit

Appendices

An example of the "toolkit journey"

This example shows the power of using the toolkit to drill down into organisation performance



had similar

cost profiles

of the variance

in costs

Tool 1: Portfolio matrix

The portfolio matrix showed that general surgery needed to improve its cost position

HRG
Patient level



Customisation
 Analysis of last year's performance by service-line

The portfolio matrix showed that general surgery needs to improve its cost position

The drivers of this underperformance were not known at this stage; therefore, further analysis is needed before decisions can be made

Tool 2: EBITDA table

The EBITDA table showed elective procedures are highly unprofitable and it was decided to look at this further

Point of Delivery	Number of spells/ bed-days		Revenue £000s	Costs £000s Direct	Indirect	Overheads*	Total EBITDA £000s	EBITDA margin
Day/ elective	2,000	n/a	2,600	900	1,500	600	(400)	-15
Non- elective	1,750	n/a	3,300	800	1,400	500	600	18
Out- patients	n/a	10,000	1,800	1,000	500	390	(90)	-5

Levels of analysis

• Activity changes over time were not looked at for this analysis

Overheads exclude the capital charge



Day/elective services were losing money. Therefore, it was decided to look at these procedures more in detail

Outpatients services will also have to be analysed

Customisation

Tool 2: EBITDA table

A further EBITDA breakdown revealed four HRGs which were driving down the margin for elective procedures

	Number of spells/	Revenue	Costs £000s			_ Total EBITDA		EBITDA margin
HRG	bed-days	£000s	Direct	Direct Indirect		£000s	%	
J37 minor skin procedures – Category 1 w/o cc	450	400	100	200	150		(50)	-13
J05 intermediate breast surgery without cc	50	100	30	70	45		(45)	-45
J35 minor skin procedures – Category 2 w/o cc	150	150	50	100	80		(80)	-53
J33 minor skin procedures – Category 3	80	150	50	90	40		(30)	-20
C35 major maxillo-facial/ENT procedures	5	20	5	10	0	5		25
Q15 amputations	5	20	5	5	0	10		50
J99 complex elderly with skin, breast or burn	5	20	5	5	3	7		35
J30 major skin procedures >49 or with cc	50	150	20	50	65	15		10
C45 ENT Complex major maxillo- facial procedures	10	30	5	3	7	15		75

Levels of analysis

- Activity changes over time were not looked at for this analysis
- Overheads exclude the capital charge



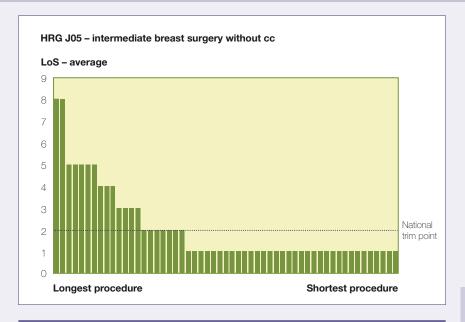
Four HRGs are losing money for the trust

It is decided to undertake further analysis on HRG J05 as it is one of the largest negative EBITDA margins

Customisation

Tool 4: Variance analysis

Length of stay varied significantly for this HRG



Customisation Levels of analysis

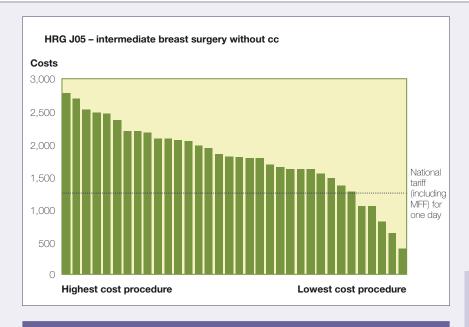
• Initial analysis on variance in LoS



Length of stay ranged from one to eight days for this HRG It was decided to analyse how costs varied for procedures of the same length

Tool 4: Variance analysis

A further drill down showed that costs varied greatly even for spells with the same length of stay



Customisation

were then carried out

Variance of costs for individual spells with the same length of stay

Trust

Directorate

Service-line

HRG

Patient level

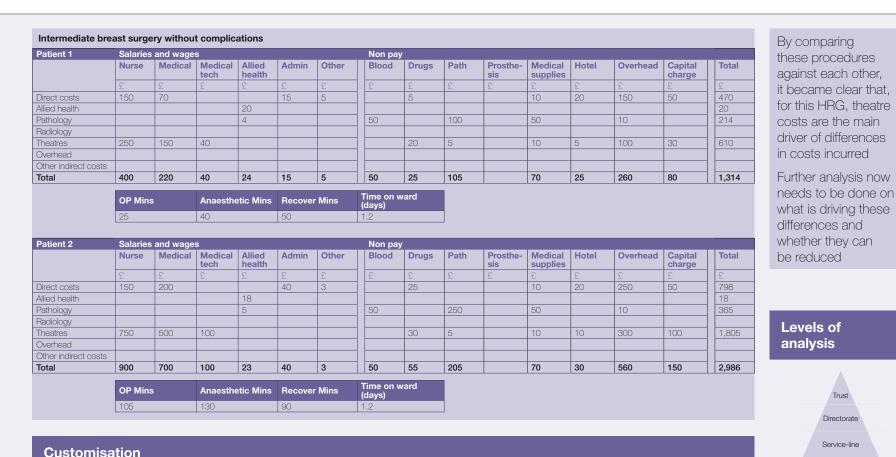
Levels of analysis

Even for spells with a length of stay of one day, costs varied from £400 to £2,800*

It was decided to look in detail at the outliers to determine the factors which were driving this difference

Tool 5: Cost matrix

A cost matrix for the outlier spells revealed that theatre costs were the main causes of differences



Levels of analysis



- A cost matrix for each individual procedure was produced
- Cost lines and cost centres were regrouped to better reflect the pilot trust's existing management information

The benefits to the trust

Significant gains will be realised by addressing the coding and operation improvement issues identified by this analysis

This work is incredibly important for all of us... We used to make decisions based on who shouted the loudest. This will not happen anymore, now it is all going to be evidence based'

Chief executive

'That is exactly the conversation that needs to occur: what is driving this variance and can we control it?'

Chief executive

There may well be coding issues, but we have also learnt something new. The assumption was that length of stay is driving costs, but this analysis shows that for this HRG it is theatre time. We did not know this before'

Deputy finance director

'I had no idea an extra 10 minutes in theatre cost so much'

Senior clinician

'If that was miscoded it could have cost us £1,000 in lost revenue'

General manager

It was agreed that further analysis needed to be undertaken to understand

- If there are systematic coding errors (e.g. assigning procedures to HRGs and/or recording actual time in theatres)
- Whether other procedures had similar cost profiles

In addition, a decision was made to begin a review of theatre operations

Implementation plan

Implementation planAppendices

The four steps towards implementation

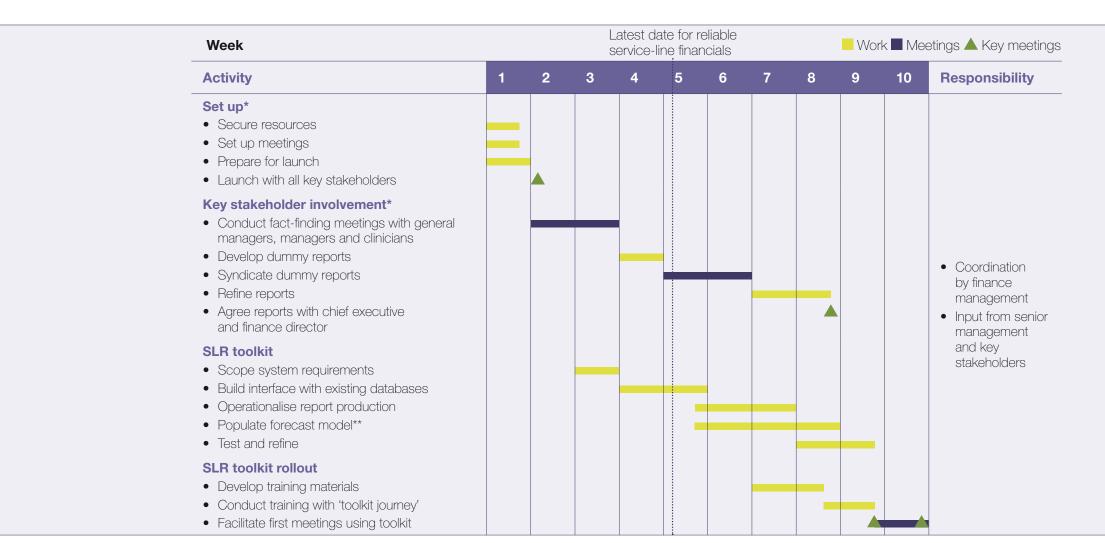
There are four essential steps to implement this toolkit



- It is important that the right resources are secured and meetings arranged across the trust to ensure rapid and successful development of the toolkit
- A launch event involving senior management, clinicians and general managers will display commitment and ensure engagement with the project
- This is crucial to success as the toolkit will only be effective if it is understood, used and supported throughout the business
- General managers and clinicians should be consulted to understand which reports are most useful to them and what customisation is required
- The reports must be easy to populate and update. Ideally, they should be automatically generated with easy-to-use drill-down fields where possible. Access databases and/or pivot tables are often the best way to achieve this
- A detailed workplan for using the forecast model developed in the pilots can be found in <u>Appendix B</u> – guide to the forecast model
- Training will be needed to ensure everyone is comfortable with the format and content of the reports
- Ideally, this will include the unveiling of a 'toolkit journey' using your own data. This will bring the toolkit to life and generate excitement and enthusiasm

Timescale for implementation

With the right management support and focus, this should take no more than ten weeks



^{*}Could take place at the same time, as setup and key stakeholder involvement are needed to develop service-line financials
**See Appendix B – quide to the forecast model for a detailed workplan

Appendices

A: Glossary of terms

Appendices

► A: Glossary of terms

Appendix A – Glossary of terms

These definitions can be customised for your trust. The important thing is to ensure clear and consistent definitions across your trust which are understood by everyone who uses the data

Term	Meaning						
Contribution	A measure of operating performance which excludes overheads. It shows the 'contribution' made towards covering the overheads of the business						
Cost centre	A breakdown of costs by clearly defined areas of managerial responsibility. It can be any unit such as a division, department or a group of employees, to which costs are assigned or allocated						
Cost line	A breakdown of costs by groupings of general ledger items, (e.g. pay, non-pay)						
Direct cost	Costs which are directly controlled by the service-line (e.g. consultant and nursing costs and drugs)						
EBITDA	Earnings before interest, tax, depreciation and amortisation. It is used as a meaningful measure of operating performance, particularly the ability to generate cash						
I&E	Income and expenditure. This is the detailed breakdown of the profit and loss statement to derive contribution, EBITDA and net income						
Indirect cost	Costs which are incurred by service-lines but controlled by shared service centres (e.g. clinical support services such as pathology, radiology, theatres, some ward costs [such as food and linen, etc.]). Typically, service-lines can control their demand for these services but not the unit cost. This is a slightly different definition from the NHS costing manual which defines direct costs as the cost that can be directly related to one service-line; indirect costs as the costs that can be related to a group of specific service-lines and overhead costs as the costs that cannot be linked to specific-service-lines						
LoS	Length of stay						
Net income	The amount remaining when all expenses are deducted from income						
Overhead costs	Costs that are not related directly to the type and quantity of services provided, such as site and corporate overhead costs						
POD	Point of delivery (e.g. elective/day-case, non-elective, outpatient)						

Appendices

B: Guide to the forecast model

Appendices

▶ B: Guide to the forecast model

Appendix B – Guide to the forecast model

- This model has been developed to allow trusts to produce forecasts for service-line performance and run sensitivities on this. It was well received by pilot trusts as a useful addition to existing forecasting tools
- By combining growth in activity with movements in costs, the model calculates the profitability of a trust for the next five years split by directorate, service-line and point of delivery (POD)
- To generate input for the forecasting model, you must have completed the seven steps required to create reliable service-line financials. When using the model itself, there are also seven steps that need to be taken and some key risks to avoid
- 'What if?' analysis can be undertaken by changing assumptions on the master control sheet, with the results clearly displayed on an I&E pivot table
- Agreeing on the base scenario typically takes three weeks, with further time required to run sensitivities and gather more advanced input

The model has been developed to allow trusts to produce forecasts for service-line performance and run sensitivities on them





- Activity comparing different activity scenarios; running sensitivities on uplifts in activity to these scenarios at the trust, directorate or service-line levels; basing activity growth on annual % increases and running sensitivities on these
- Changes in tariffs sensitivities on changes in tariff inflation by trust, directorate or service-line
- Cost improvement programmes sensitivities around the size of future cost improvement programmes
- Cost driver growth sensitivities around basic assumptions of cost growth (e.g. RPI, wage inflation)
- Day case rates scenarios around changes in daycase rates at a trust or service-line level

The model was well received by pilot trusts as a useful addition to existing tools

'We would probably use this, it complements the two models we have already'

'We have never been able to run 'what if?' analysis before because we couldn't link activity and costs. This will let us do it'



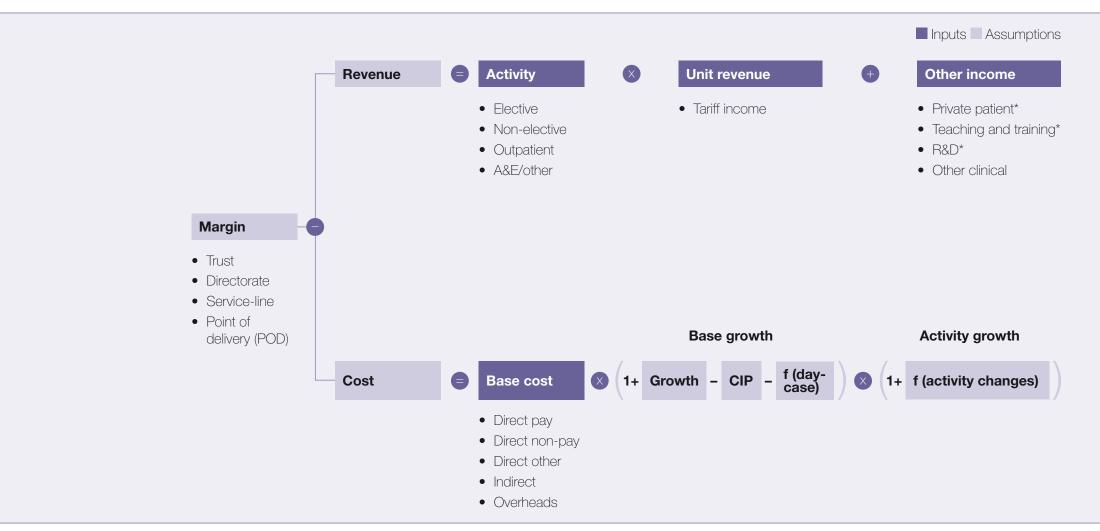
'Forecasting by service is critical to link service-line and overall trust strategy'

'I had never thought of how costs might scale differently with activity – this model is making us ask loads of new questions'

University College London Hospitals NHS Foundation Trust



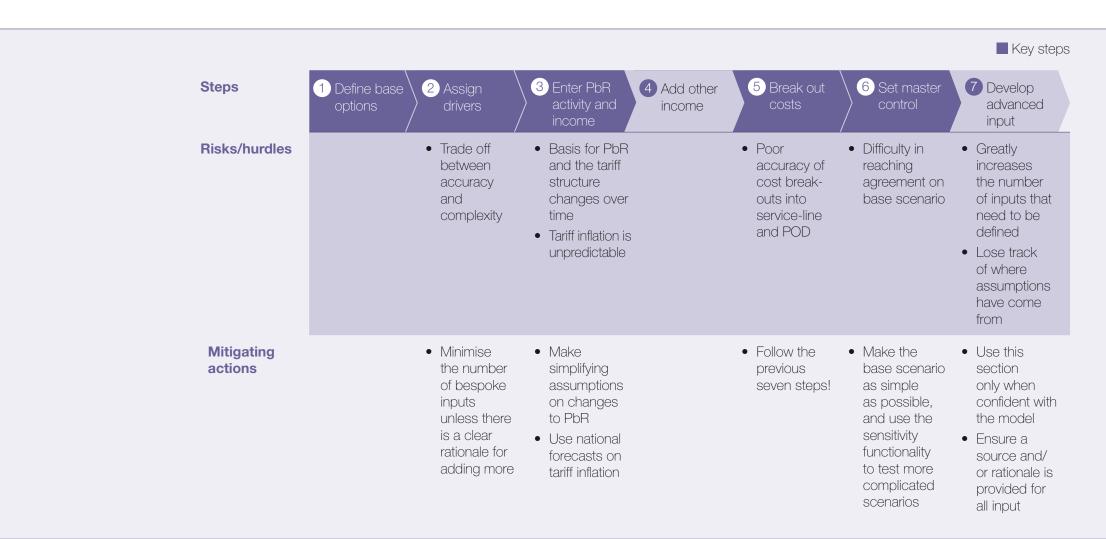
By using appropriate cost and revenue drivers trust profitability can be easily calculated



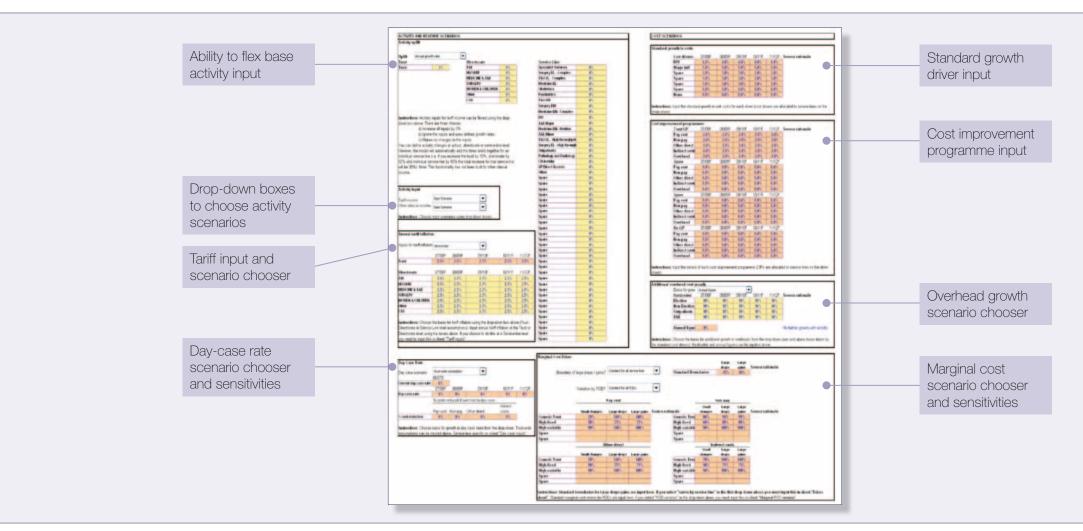
When using the model there are seven steps that need to be taken

Key steps 3 Enter PbR 5 Break out 6 Set master **Steps** 1 Define base 2 Assign 4 Add other 7 Develop activity and advanced income input Define base Enter other Define • As **Process** Enter names Enter base Enter base options of of servicevear PbR the base confidence income by year cost the forecast lines activity and service-line data by assumptions increases. such as income data and POD service-line, on master further Assian directorate POD and control sheet by serviceengage the drivers of cost bucket • Ensure these line and POD business names, growth generic cost to develop to each If available. options are service-line improvement service-line enter stored as the programmes specific pre-defined capacity plan and standard inputs (e.g. forecasts for base scenario cost and bespoke future years • Run margin margin sensitivities drivers assumptions and conduct based on 'what if?' capacity analysis constraints) • Requires basic Excel knowledge IT and training • Training should be carried out by experienced users Advanced input should not be used until the base model is populated and understood

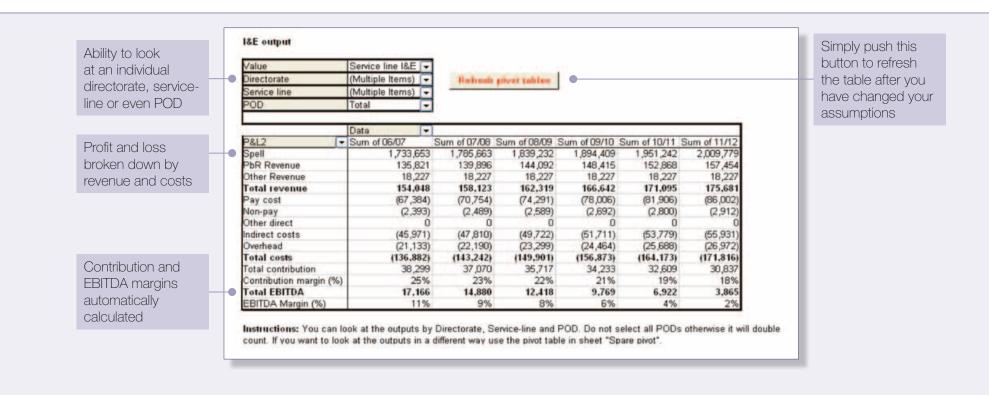
There are also some key risks to avoid



A "what if?" analysis can be undertaken by changing assumptions on the master control sheet

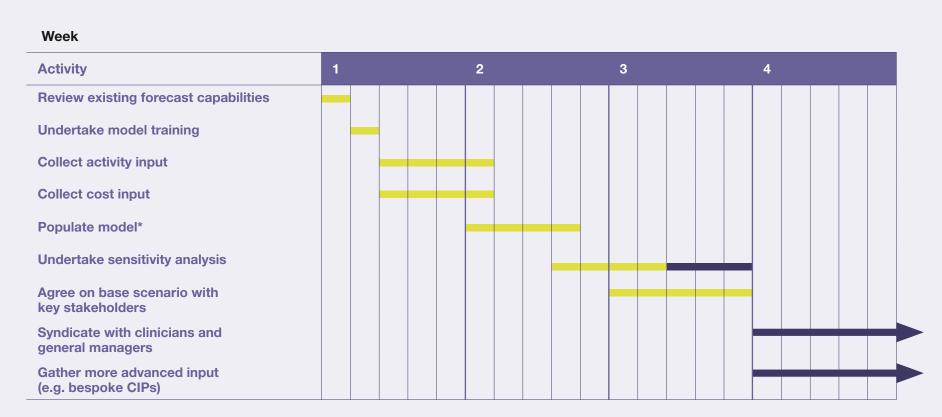


The results are clearly displayed on an income and expenditure pivot table



Agreeing on the base scenario typically takes three weeks, with further time required to run sensitivities and gather more advanced input

This timeline assumes that the work to produce reliable service-line financials has already been undertaken.



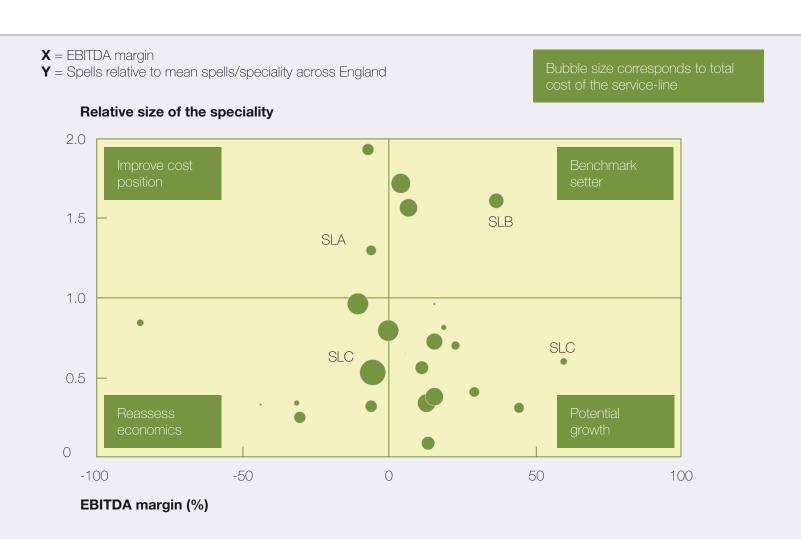
Appendices

C: Sample reports

Appendices

C: Sample reports

Appendix C – Sample reports Tool 1: Portfolio matrix



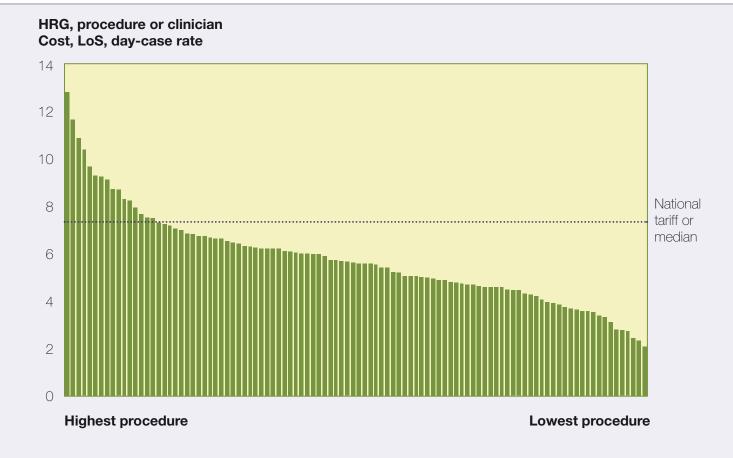
Tool 2: EBITDA table

Service-line	Number of spells/ bed-days	Number of out- patients	Revenue £000s	Costs £000s			Total EBITDA £000s	EBITDA margin %	% change in activity
				Direct	Indirect	Overhead			
ITU	X	×	X	X	X	X		X	
Pain management	X	Х	X	X	X	X		X	
Palliative medicine	X	Х	X	X	X	X		X	
GUM	X	Х	X	X	X	X		X	
HIV	X	Х	X	X	X	X		X	
Accident & Emergency	X	Х	X	X	X	X		X	
Cardiology	X	Х	X	X	X	X		X	
Care of the elderly	X	Х	X	X	X	X		X	
Clinical haematology	X	Х	X	X	X	X		X	
Dermatology	X	Х	X	X	X	X		X	
Endocrinology	X	Х	X	X	X	X		X	
Gastroenterology	X	Х	X	X	X	X		X	
Medical oncology	X	Х	X	X	X	X		X	
Neurology	X	X	X	X	X	X		X	
Rheumatology	X	Χ	X	X	X	X		X	
Thoracic medicine	X	Χ	X	X	Χ	X		X	
Burns	X	Χ	X	X	X	X		X	
General surgery	X	Χ	X	X	X	X		X	
Ophthalmology	X	Χ	X	X	Χ	X		X	
Plastics	X	X	X	X	X	X		X	
T&O	X	X	X	X	X	X		X	
Urology	Х	Х	Х	X	X	X		X	
All paediatrics	Х	Х	X	X	X	X		X	
Gynaecology	Χ	Х	Х	X	X	X		X	
Obstetrics	X	X	X	X	X	X		X	

Tool 3: Detailed income and expenditure

Directorate, Service-line, POD or HRG	Actual	Plan	Variance	Commentary
Income				
Tariff income	Χ	X	X	_
Non-tariff income	Χ	×	X	_
Non-NHS clinical income	Χ	X	X	_
Other income	Χ	×	X	_
Total income	Х	X	Х	_
Direct costs				
Direct pay costs				
- Nursing	Χ	×	X	_
- Consultants	Χ	X	X	_
- Other clinical	Χ	×	X	-
- Non-clinical	Χ	×	X	_
Non-pay costs				
- Drug costs	Χ	X	X	_
- Supplies	Χ	X	X	_
- Other direct costs	Χ	X	X	_
Indirect costs				
- Allied healthcare professionals	Χ	X	X	_
- Radiology	Χ	×	X	_
- Pathology	Χ	X	X	_
- Theatre	Χ	×	X	_
- Other services	Χ	×	X	_
Total direct and indirect costs	Х	Х	х	-
Contribution	Х	Х	х	-
Contribution margin (%)	Х	Х	х	-
Overhead costs				
• Site costs	Χ	×	X	_
Corporate costs	Χ	×	X	_
BITDA	Х	х	х	_
EBITDA margin (%)	Х	х	х	-
Interest, depreciation and amortisation	Х	x	х	_
Earnings	Х	X	X	-

Tool 4: Variance analysis



Tool 5: Cost matrix

Cost centre	Clinical personnel	Nursing personnel	Allied healthcare professional personnel	Other personnel costs	Drug costs	Material costs	Other medical supplies	Other	Personnel & material costs medical infrastructure	Personnel & material costs non-medical infrastructure	
Ward											
Intensive care											
Dialysis											
Anaesthesia				Direct	costs						
Delivery room											
Therapy									Corporate		
Other direct									and site co		
Allied healthcare											
Radiology											
Pathology				Clinical supp	ort services						
Theatres											
Other CSS											

Further information about SLM

This guide is one of a series of documents produced by Monitor to help NHS foundation trusts implement SLM. All of these guides can be found on Monitor's website www.monitor-nhsft.gov.uk/slm

- Working towards service-line management:

 a how to guide this guide sets out the processes and structures necessary to implement SLM within a trust setting;
- Working towards service-line management: organisational change and performance management – this guide looks at ways in which service-line reporting (SLR) can be used as a motivational tool and to influence;
- Guide to developing reliable financial data for service-line reporting: defining structures and establishing profitability – this guide helps foundation trusts move towards service line reporting and describes how some of the obstacles to SLR can be overcome;
- Working towards service-line management: a toolkit for presenting operational service-line data – this guide describes a range of service-line reporting (SLR) tools and shows how they can be used to present data to encourage informed decision making; and

 Working towards service-line management: using service-line data in the annual planning process – this guide shows how SLR data can be incorporated into a trust's business planning cycle.

To help implement SLM, Monitor – working in conjunction with various external organisations – can offer a comprehensive package of support, specifically tailored to individual needs, both in terms of cost and relevance. The support routinely includes consultancy and advisory services, board level diagnostics, individual coaching, strategic goal setting and the opportunity to join learning sets. For more information contact slm@monitor-nhsft.gov.uk



4 Matthew Parker Street London SW1H 9NP

T: 020 7340 2400

W: www.monitor-nhsft.gov.uk E: slm@monitor-nhsft.gov.uk

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