PATIENTS' FORUM

FOR THE LONDON AMBULANCE SERVICE

FURTHER COMMENTARY ON LONDON AMBULANCE SERVICE'S OUR STRATEGIC INTENT 2018/19 – 2022/23

INTRODUCTION

The purpose of this paper is to provide a commentary on some of the issues and possible concerns, which arise from the London Ambulance Service's (LAS) publication of the document 'Our Strategic Intent 2018/19 – 2022/23' (the document).

The publication by the LAS of this wide ranging and visionary document is welcomed, especially at a time of major changes, and resource constraints, in the healthcare sector. A challenge which is compounded by the ageing population and the need to successfully implement performance improvements following the Care Quality Commission (CQC) inspections.

Specific observations and suggestions are set out below. These are offered in a constructive attempt to assist with the drafting of the overarching strategy, its component strategies and their associated operational plans.

NATURE OF LAS's STRATEGIC INTENT

We believe there are a number of areas where further work and engagement are needed before the proposals can be considered appropriate for inclusion in a final strategy. There is a potential risk that a plausibly written, but insufficiently developed, visionary plan could result in managers and staff devoting too much scarce time in attempting the premature implementation of proposals, which may turn out to be inadequately researched, and possible undeliverable.

To borrow an analogy from the Second World War, there appears to be a risk of a 'Bridge Too Far' syndrome, i.e. attempting too much, too quickly, with insufficient resources. This example is quoted as evidence of the need for the strategy, especially such a visionary one, intended to last five years, to be comprehensively evaluated and supported by robust quantitative evidence.

ISSUES AND OPTIONS

It is unfortunate that some of the proposals contained in the document do not appear to be accompanied by a supporting 'Issues & Options' analysis. Such an approach could comprehensively set out, quantify and evaluate the issues facing the LAS and the options available to resolve these issues. It would also quantify the nature and deliverability of the visionary proposals

contained in the document, and especially those set out in Section 5.3, some of which appear to derive from aspirational narratives rather than a detailed analysis and assessment of the potential contribution of your NHS partners could make to realisation of the your vision, over what is currently being commissioned by CCGs and delivered by existing providers.

The use of workshops for the preparation of an Issues and Options analysis could provide an invaluable opportunity for the inclusion of operational and front-line staff in the planning process. It would also enable them to contribute their personal insights based on experience of day-to-day operations.

METHODOLOGY

We believe it would be beneficial if your strategy, being prepared at such a critical time of change, increasing pressures and new/alternative providers, could evidence that the developing strategy was supported by appropriate strategic planning methodologies. This approach could assist in providing a more rigorous process that would ensure all key factors are identified and considered. Relevant methodologies could include:

- SWOT Analysis
- Product–Mission (Markets) Matrix – Ansoff
- Abell Matrix (above with the inclusion of technology as a third axis)
- Five Competitive Forces - Porter
- Value Chain, including the integration of its component elements – Porter

and can be of value when running workshops with operational managers and front line staff who are less familiar with strategic planning concepts.

The involvement of operational managers is essential to ensure that the resulting strategic plan, and its key components, reflects reality and is genuinely deliverable. We suggest it would be beneficial to embrace quality circle / total quality management tools in testing the deliverability of the developing strategic plan. The test: 'What Must Go Right' is a valuable tool to assist this process.

CORE AND ADDITIONAL ACTIVITIES

The LAS continues to be in the process of implementing improvements to its core operational functions following CQC inspections.

In addition to this Section 5, and in particular Section 5.3, of the document identifies a number of additional and fundamental activities which the management of the LAS and the Patients' Forum are keen to see delivered.

The workshop sessions at the patient and public engagement event held on Thursday 7th December focused on three of the proposed four additional activities set out in Section 5.3. These initiatives are at a formative stage and

we would like to have access to the research, analysis and pilot testing that is being undertaken to enable these essential services to be effectively embedded in the five-year strategic plan.

We also suggest that the strategic plan clearly differentiates between the existing core activities, which were identified by the CQC as needing improvement and proposed new additional activities. We would like to see evidence of separate resourcing and financial projections for these two streams of activity.

ADDITIONAL ACTIVITIES

Section 5.3 identifies four patient groups of: Falls, Mental Health, Maternity and End of Life Care for whom the LAS proposes alternative and enhanced responses.

The wording of the document suggests that instead of conveying some of these patients to hospital, the LAS with access to specialist resources and staffing, wants to increase the resolution of some of these calls without conveyance to hospital. It is important to make it clear in the strategy that the purpose of alternative resolution is to enhance patient care and that clinical governance supports this aspiration. The section does not provide adequate details of the current non-LAS support for each of the four patient groups, which is likely to vary from CCG to CCG and from specialist trust to specialist trust.

The narrative suggests that LAS staff may be accompanied by specialist staff or staff with incremental specialist training in responding to some patients, e.g. those in a mental health crisis, but it is not clear who will resource this training and the salaries of the staff involved or whether there will be incremental cost for the LAS?

We suggest that detailed activity levels need to be ascertained for each of the patient groups and existing care plans and pathways to ensure that the developing models of care are clinically the most appropriate to achieve the best clinical care. We believe there is a compelling case for these proposals to be comprehensively researched and evaluated and the results of these investigations included in the strategic plan. The Forum is able to share its own experiences of these services to support the developing strategy.

TIMETABLE

The title of the document indicates that the strategy is intended to be delivered across five years from 2018/19 to 2022/23.

There is only one reference to a Year One deliverable, which is in the Estates section on page 41. The document also contains a limited number of references to 'focus' and 'priorities', but they are not accompanied by an indication of the timescale for their delivery.

Given the scale of aspirations set out in the Strategic Intent, there is an urgent need to identify and agree year by year priorities, especially where projects and work streams transcend functional boundaries.

We suggest that the developing strategy and its sub-strategies, will be far more powerful if they are accompanied by a robust and realistic implementation timetable for each component of the strategy, including implementation stages, project phases and delivery milestones.

PERFORMANCE VARIATIONS

High level performance reports indicate that there are significant and sustained variations in performance levels across the LAS area. It appears that the residents of some CCG areas benefit from a higher level of performance. Extracts from performance reports are attached as appendices. Greater variations in performance are likely to be revealed by a finer grained geographic analysis of detailed internal performance reports. It is not clear from the high-level reporting if there are further performance fluctuations according to the time of day, day of the week, time of year and age of patient.

Performance fluctuations may, in whole or in part, be a consequence of pressures at hospital emergency departments. This constraint has implications for the extent to which the LAS, acting alone, will be able to implement the improvements which will be necessary to raise performance in the worst served parts of London.

As a consequence of this geographic variation, we believe that the strategy should identify the constraints, and quantify the additional LAS resources, which would be needed to compensate for delivery in currently poorly performing locations, to raise performance to the level achieved in the highest performing locations. It is realised that this means the LAS will have to invest in additional resource in order to compensate for shortcomings elsewhere in the healthcare system, and especially for delayed handovers at acute hospitals. This pressure on the LAS needs to be quantified across each year of the strategic planning horizons and supported by a specific action plan.

In summary, the strategic plan should include a section on performance standards and variations, together with a commitment to raise all performance to the level of the best achieved within the LAS area, i.e. adopt a strategy of 'levelling up' to provide high quality clinical responses for all patients in London requiring emergency and urgent care.

PERFORMANCE MONITORING AND ANALYTICS

While there are some brief references to performance information in Section 6.6.1, the document would benefit from a major expansion of this section. We believe that comprehensive and transparent performance information can

significantly assist in facilitating staff and stakeholder commitment to organisational evolution and change.

It would be beneficial if successor documents could set out existing and proposed performance reporting in more detail, and support this by a detailed appendix.

While the honesty of the following statement in Section 3.4.2, on page 16, is to be applauded: "*To date we have been unable to use the deep and unique data sets we have to deliver significant improvements in performance.*"

This clearly identifies the priority which needs to be allocated to this area and the proposals set out in section 6.6.1. An expanded discussion of performance reporting should include a consideration of Winter Pressures, and in particular the recently introduced handover delays statistics.

For the record, it is a matter of disappointment that the LAS Weekly Performance Pack, which is circulated to every CCG in London, amongst other stakeholders, is no longer distributed to the Patient Forum for the LAS. Given the supportive role which the Patient Forum is capable of providing to the LAS, it is hoped that this circulation will be restored.

BENCHMARKING

The mention of Benchmarking on page 48 is most welcome (although rather short), as the comparitor of activities in the LAS to similar activities or processes delivered by other organisations, and can provide invaluable insight when preparing strategic and operational plans. We suggest that the strategic plan should be supported by a section, which is based on benchmarking key performance areas of the LAS to that of other UK ambulance providers.

Benchmarking can assist in identifying key issues and improvement opportunities for the LAS. It can also provide information on potential additional activities where other UK ambulance services have piloted their introduction, together with the results and resourcing implications. In addition to an overarching benchmarking of the LAS, we believe there are likely to be significant benefits in the more detailed benchmarking of the key component areas, including:

- Performance monitoring,
- Human Resources
- Estates,
- Fleet, and
- IT

INTEGRATION WITH INFRASTRUCTURE STRATEGIES

Representatives of the Patient Forum have been advised that separate strategies have been prepared or are in the course of being prepared for key strands of LAS activities. These may include:

- People and Organisational Development
- Clinical (2017)
- Estates
- Fleet
- IT

We believe that these free-standing (daughter) strategies need to be fully integrated into the overall LAS strategy, in order to fully maximise the potential synergies and outcomes that such an integration could achieve. There is a risk that free-standing, or poorly integrated, daughter strategies could foster 'silo thinking'. A fragmented approach would be unfortunate and suboptimal, especially when so many issues transcend functional boundaries and require an integrated approach, especially at a time of both accelerating external change and resource pressures.

HUMAN RESOURCES

As indicated in the above comments, it is unfortunate that human resources is the subject of a separate and freestanding People and Organisational Development strategy. Given its importance, and the challenges facing the LAS, it is strongly recommended that this strategy is further developed as an integral strand of the overarching LAS strategy. Operational experience and CQC inspections have highlighted the integral nature of Human Resources to all LAS activities.

There are also major concerns associated with recruitment and retention, including higher than desired levels of staff turnover. While there is a partial reference to this in Section 6.2.2, these concerns do not appear to be adequately addressed in the strategic intent. A particular concern is that the LAS is at risk of losing experienced staff to other ambulance services and the wider healthcare sector.

These concerns are compounded by the extent to which the front-line LAS workforce does not reflect, in terms of ethnicity, the communities it serves.

In addition to these staffing concerns, there are anecdotal accounts of poor morale, bullying and prejudice and these accounts are supported by responses to the annual staff survey. There would appear to be a strong case for implementing regular anonymised surveys of staff in order to track morale and related issues. Staff have told the Forum that they do not believe the current staff surveys are truly anonymous. In order to ensure credibility, these surveys should be conducted by genuinely independent third parties. An

example would be the staff surveys used by many higher education institutions.

While referring to Human Resources in a number of places, and in particular in Section 6.5.2 on pages 44 and 45, there appears to be an overwhelmingly 'top down', rather than participative, approach to this subject.

There also are some references to staffing matters in the document, which could be interpreted as being somewhat mechanistic. For example, the statement, "We will find new talent" in Section 6.5.1. Also, Section 7.2 on Staff Engagement reads as the description of a 'top down' communication experience. There need to be greater opportunities in the developing strategy for a more inclusive approach in relation to Human Resources matters.

It would be unfortunate if laudable improvement strategies designed to address operational and CQC concerns failed to gain the wholesale and committed support of the front-line staff. The inherently devolved nature of ambulance operations, with front-line crews working on their own for much of their shift, poses particular concerns for the successful implementation of any strategy which has not secured their full commitment.

It is therefore unfortunate that the proposals set out in the document do not appear to have been derived from a process of extensive engagement with the front-line staff. Rather, the proposals give the impression of having been drafted by senior management and then presented in a form, which could be likened to 'Moses bringing down the tablets from the top of Mount Sinai'. Perceptions of a 'top down' approach, even if unintended, are unlikely to result in the enthusiastic support from front line staff for the implementation of the proposed LAS strategy.

We would strongly encourage the LAS to embrace participative methodologies, such as those used by quality circles and total quality management initiatives when developing all LAS strategies. These techniques can make an invaluable contribution to facilitating change management – providing they are implemented with the wholehearted commitment of senior and line management.

EVOLVING HEALTH AND SOCIAL CARE SECTOR

The Strategic Intent, and especially section 5.3 on additional activities, needs to be further developed jointly with CCGs and Trusts, which are currently commissioning and providing these services in the LAS area. We are aware that this is the case with mental health and maternity care. Alternative care pathways also need to be subject to a strict regime of governance to ensure that all of these services are available as an when needed by the LAS for patients needing urgent and emergency care. We would like to see details of the financial plan to fund these services.

IMPLICATIONS OF STP'S

It would be beneficial if the document and subsequent strategies considered the implications of the proposals contained in the five Sustainability and Transformation Partnerships (STP's) in the LAS area in much greater detail.

The brief discussion in Section 4.1 does not appear to refer to the STP proposals for the closure of A&E departments at acute hospitals. Nor does it address the proposed closures of substantial numbers of acute and general hospital beds - which would constrain the number of patients, who could be accommodated and processed by the associated A&E departments. Permanent closures of A&E departments will have implications for ambulance activity, in that ambulances will have to convey patients to more distant hospitals.

This pressure is likely to be exacerbated if there is a shortage of beds in hospitals with A&E departments, as these A&E departments will be unlikely to accept ambulance conveyances when the patient is likely to need admission to an AMU or ward if all those beds are full. As a result, the LAS may need to convey more patients to more distant hospitals as the five year strategic planning horizon progresses.

Section 6.4.1 of the document contains the statement, "*We are seeking to consolidate our estate creating operational deployment centres across the capital*". We believe that whilst conducting such a review may well be beneficial, there could be significant risks for patients if it fails to fully take account of the proposals for changes in the provision and location of A&E, acute and specialist hospitals set out in the five London STP's and their related documents.

Some STP's contain aspirations that fewer patients, as a proportion of the population, will need hospital provision in the future. This is despite an ageing population with its increasing health needs. It is extremely difficult to identify any tangible evidence that reductions in demand of the scale envisaged have or can be delivered. It would therefore be prudent for the LAS to prepare projections and strategies on the basis that the current levels of growing demand will continue and will further increase due to significant population growth and ageing.

It is therefore essential that both the strategic intent and the subsequent strategy is informed by, and based on, a detailed examination and assessment of the proposals contained in the five London STP's to reduce and/or relocate A&E, acute and specialist hospital provision. At the same time, it would be prudent to ignore the unproven aspirations to reduce demand for hospital provision which are contained in the STP plans. This combined approach should contribute to an identification of the maximum patient pressures, which might be placed on the LAS over the strategic planning period.

INTEGRATION WITH OPERATIONAL PLANS

We recommend that the new strategy demonstrates how it will be integrated with operational plans and provides details of those responsible for implementation.

FINANCIAL AND OPERATIONAL PROJECTIONS

We would have found it useful for the Strategic Intent to have provided more quantitative detail. A particular concern is the reference to apparently unsubstantiated aspirations in Section 5 on page 21, where the document states:

> "*A reduction in the number of conveyances to an emergency department of up to an estimated 40% may be possible*", and
>
> "*reduce the number of patients unnecessarily admitted into hospital overnight, enabling up to 10% of money currently spent on emergency department services and 4% spent on non-elective inpatient care services*"

We hope that the strategic intent and its associated financial projections will not be based on these unrealistic aspirations. It would be a matter of considerable concern if this were the case, as there appears to be a lack of evidence that they will be achievable, either wholly or partly, at any point in the five year planning period. The scale of reduction envisaged by the LAS would represent a substantial and dramatic reversal of the year-on-year growth trend in activity levels. The deliverability of the reduction therefore appears highly questionable over the lifetime of the plan.

There are likely to be significant limitations on the amount of influence which the LAS can successfully bring to bear on its cash strapped 'partners' (CCGs and hospitals).

We believe that careful consideration should also be given to the extent to which performance improvements anticipated in the five year plan are actually within the control of the LAS. Many key issues, such as A&E handover delays, are a consequence of the actions, or inactions, of others. Considerable care therefore needs to be exercised when quantifying and including any improvements, which are dependent on factors which are outside the control of the LAS.

It would be desirable if the activity levels associated with existing and proposed additional activities could be quantified and those activity levels then related to the associated financial implications.

This quantification needs to identify the financial implications of any reductions in the level of existing activities, which the strategy anticipates achieving during the plan period. The inclusion of this information would be particularly valuable as so many of the existing activities are currently experiencing sustained year-on-year growth pressures.

The existence of financial pressures is apparent from the Finance section of the NW London STP which states on page 52: "*There are also particular challenges in relation to:*

> *The deficit in London Ambulance Service, of which only the NWL related element is included in this plan, which requires further joint working in order to agree a solution. "*

This statement indicates that there are significant financial pressures, which need to be quantified and the causes addressed in new strategy.

111 SERVICES ACROSS LONDON

While there are a number of references to 111 services in the document, it does not appear to contain a comprehensive section on this key link in the emergency care pathway.

It would be beneficial if such a section could be added and include the various proposals as to how the 111 services could be enhanced in order to relive pressures on the emergency healthcare system. Also there is a perception that in some instances, the 111 services can actually generate additional pressures for the LAS and hospital emergency departments.

The success of the LAS in winning the north east London 111 contract for 7 boroughs will have a significant impact on the deliverability of the strategy. It is therefore recommended that the 111 services would be an invaluable early subject for analytic evaluation and benchmarking, both within the LAS region and with the 111 services operating elsewhere in the UK.

OFFER TO ASSIST/ENGAGE

The comments, suggestions and observations set out above are intended to assist the LAS with the development and implementation of its strategies.

They should be regarded as a contribution from the Patients' Forum as an independent stakeholder, which is committed to the continuing improvement of the LAS and the services it delivers to patients. We would be most happy to discuss these points in more detail and to contribute to the further evolution of the LAS's strategies.

James Guest FCA MBA
Patients' Forum for the LAS
January 2018

APPENDICES

Strategic Planning diagrams

- SWOT Analysis
- Product–Mission (Markets) Matrix – Ansoff
- Abell Matrix (above with the inclusion of technology as a third axis)
- Five Competitive Forces - Porter
- Value Chain, including the integration of its component elements – Porter

Performance Variations

- Category A response times by CCG
- Cardiac Arrest response times by CCG and outcomes by CCG and hospital
- Stroke response times by CCG and LAS group station
- STEMI response times by CCG and LAS group station
- Major Trauma response times by CCG

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APPENDICES

STRATEGIC PLANNING METHODOLOGIES DIAGRAMS ETC

SWOT Analysis (Internal Strengths & Weaknesses, External Opportunities& Threats).

Product–Mission (Markets) Matrix – Ansoff

Abell Matrix (above with the inclusion of technology as a third axis)

Five Competitive Forces - Porter

Value Chain, including the integration of its component elements – Porter

Strengths and Weaknesses, Opportunities and Threats (SWOT) - Example of an Analysis Template

Internal (Organisational) Issues

criteria examples	Strengths	Weaknesses	criteria examples
Advantages of proposition? Capabilities? Competitive advantages? USP's (unique selling points)? Resources, Assets, People? Experience, knowledge, data? Financial reserves, likely returns? Marketing - reach, distribution, awareness? Innovative aspects? Location and geographical? Price, value, quality? Accreditations, qualifications, certifications? Processes, systems, IT, communications? Cultural, attitudinal, behavioural? Management cover, succession? Philosophy and values?			Disadvantages of proposition? Gaps in capabilities? Lack of competitive strength? Reputation, presence and reach? Financials? Own known vulnerabilities? Timescales, deadlines and pressures? Cashflow, start-up cash-drain? Continuity, supply chain robustness? Effects on core activities, distraction? Reliability of data, plan predictability? Morale, commitment, leadership? Accreditations, etc? Processes and systems, etc?

External (Environmental) Issues

criteria examples	Opportunities	Threats	criteria examples
Market developments? Competitors' vulnerabilities? Industry or lifestyle trends? Technology development and innovation? Global influences? New markets, vertical, horizontal? Niche target markets? Geographical, export, import? New USP's? Tactics: eg, surprise, major contracts? Business and product development? Information and research? Partnerships, agencies, distribution? Volumes, production, economies? Seasonal, weather, fashion influences?			Political effects? Legislative effects? Environmental effects? IT developments? Competitor intentions - various? Market demand? New technologies, services, ideas? Vital contracts and partners? Sustaining internal capabilities? Obstacles faced? Insurmountable weaknesses? Loss of key staff? Sustainable financial backing? Economy - home, abroad? Seasonality, weather effects?

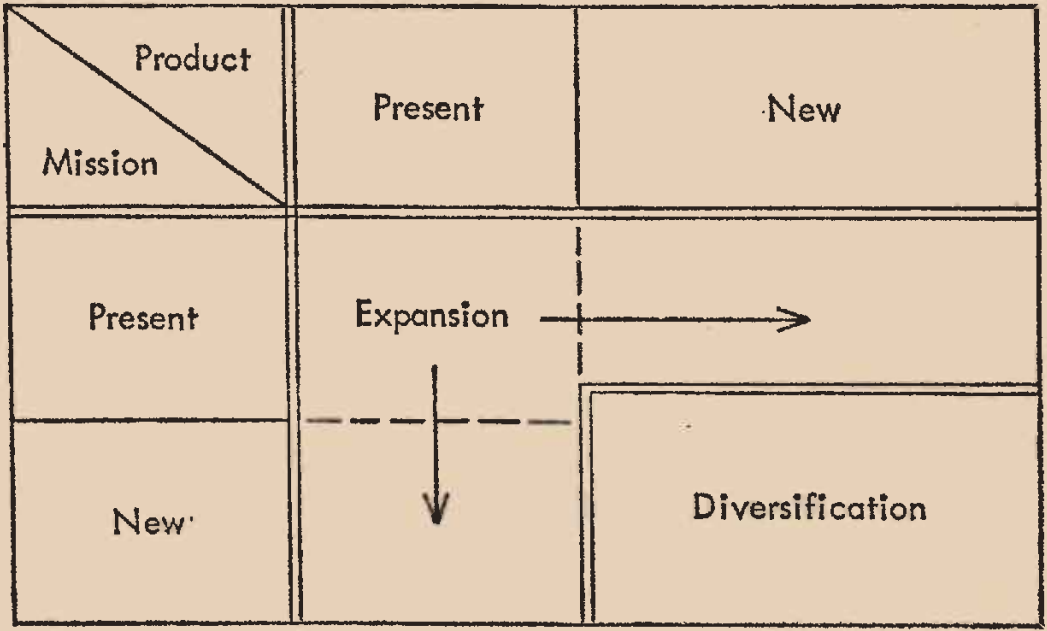
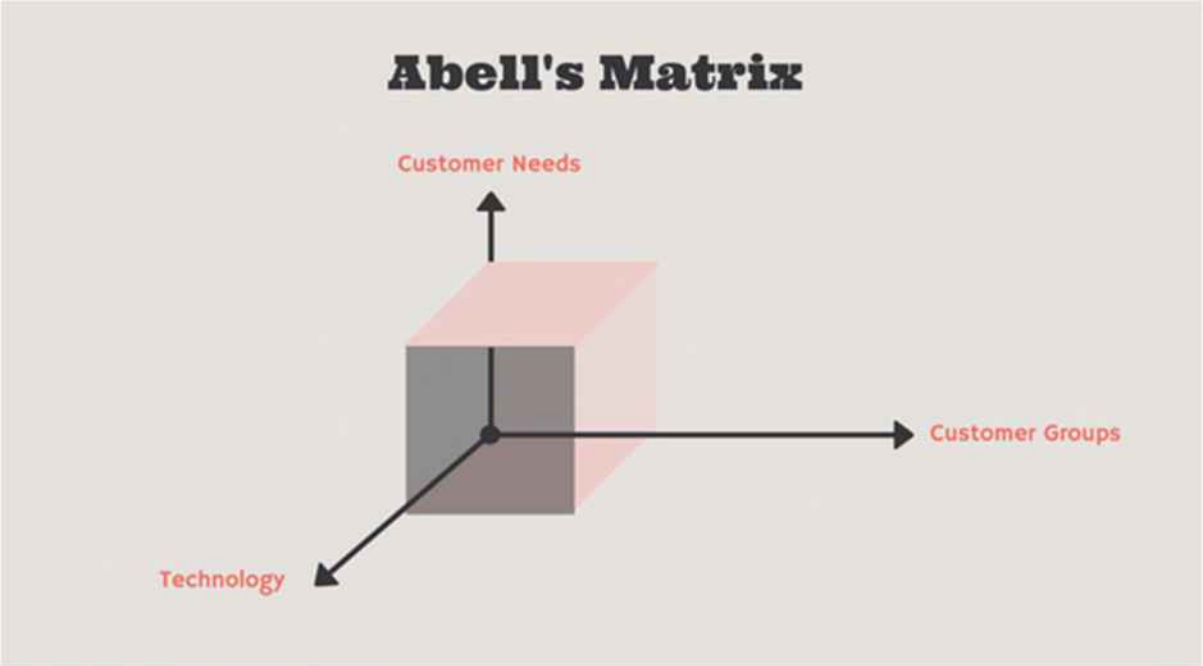


Figure 7.1. Product-mission matrix.

ABELL MATRIX



In this article, we will look at 1) **what is the Abell Matrix?**, 2) **understanding the matrix**, 3) **how to apply Abell's framework to your business**, and 3) an **example**.

WHAT IS THE ABELL MATRIX?

The Abell matrix is a three dimensional tool most often is referred to as the three dimensional business definition model. The model is used to analyze the scope of operation for a business. This may include areas such as the technologies and products a business operates in a market or the audience that it targets. A detailed analysis of the business's current activities can help create strategies for the future that will help the business stay tuned to the changes that may occur within the market.

The three dimensions of the business are the **customer groups** (who will be served by the business), **customer needs** (what are the customer needs that will be met) and **technology or distinctive competencies** (how are these needs going to be met). A major point of importance in this matrix is to focus on understanding the customer rather than the industry and its products and services. Through these three dimensions, this tool helps define a business by its competitive scope (narrow or broad) and the extent of competitive differentiation of its products/services.

UNDERSTANDING THE MATRIX

Abell described the strategic planning process as the starting principle for an organization's business. This process in turn is driven by the mission statement which provides direction, focus and the basis for strategies to be further elaborated and driven down. Abell used three key questions as the three dimensions on his model and these are the foundation for the formulation of the mission statement itself.

- What are the customers of the organization?
- How can the organization meet the needs of its customers?
- What techniques are employed by the organization to meet these customer needs?

When plotted on a three dimensional model, the horizontal axis is taken as the customer groups, the vertical axis as their buying needs and the inclined axis is taken as the applied technologies. Taken together, a summarized version of the organization's business model can be viewed in one glance.

This overview helps provide the company with a quick glance at the factors most important to the development of a marketing concept. The framework can be optimized by sorting the different factors that make up all three dimensions by their relative importance for the company. The most important factors should be closest to the 0 axis and should be given the highest priority and will be immediately visible to the company.

The Three Dimensions

- **Customer Needs:** This leg of the model identifies and lists down all the customer needs that are relevant to the company in question. Customer needs are identified based on the product offering and a link is made to customer benefits. As an example, a software developer who has studied customer needs in relation to their product will respond by providing easy to install software packages and may provide other useful options such as an anti-virus, a software cleanup option as well as manuals and tech support.

- **Technologies:** Unlike the name suggests, the word technologies is taken here in a broader context to describe all those technologies that are used to create a product as well as put in on the market. Issues here include things as diverse as the marketing campaign being use or the way market research must be conducted. Taking our software example further, the manufacturer will used the latest technologies in the product itself as well as proving a helpdesk which provides the best possible and most relevant information.

- **Customer Groups:** There would be no market without customers purchasing products on offer. This is why marketing is all about the buyers. It is vital for every organization to understand how to segment the market and which segments to target in order to successfully sell a product to them. Once the market has been segmented, the company needs to work toward acquiring as much knowledge as possible about the different target groups and offer specific products or campaigns to these segments. Our software manufacturer may choose to serve both business and customers and will need a separate strategy and account managers for its B2B and B2C lines of business.

History

Famous for his business definition model, Dr. Derek F Abell is the Professor Emeritus and co-founder of the European School of Management and Technology, established in Berlin, Germany. In 2012, he was also appointed the international dean at HSM Eduacao in Sao Paulo, Brazil. His work has been published as books and academic journal articles. He writes about strategic marketing, general management, leadership and executive responsibilities.

Dr. Abell obtained a bachelor's degree in aeronautical engineering from the University of Southampton in 1960 before moving to the United Stated and pursuing a master's degree in Industrial Management from MIT's Sloan School of Management in 1966. He followed this with a doctorate in business administration from the Harvard Business School in 1970. He then served as the full time member of the Harvard Business School faculty until 1981. His other academic positions have included Insead in France and International Institute of Management Development in Switzerland among others.

Limitations

There is a strict marketing emphasis within the Abell model, which limits the framework from being widely used and as a key approach used to define competitive strategies for a business. In addition, there is no room to accommodate external factors such as governments and other regulating bodies. The three dimensional model also makes the analysis more complex than a two dimensional one. There is only a provision for abstract growth directions and the model does not provide support to determine the appropriate size and scale of the business.

Tools for Building the Model

Given the relative complexity of this model because of the three dimensions, users may find is easy to access one of the many available tools to help build their own framework. One of these is:

- Abell Model Creator Free

HOW TO APPLY ABELL'S FRAMEWORK TO YOUR BUSINESS

Practical Use Tips

To begin implementing this model, it is first important to understand the dimensions and the entire model space. The three-dimensional space of the cube is the business scope of the company. The model helps identify what the company has been doing and also helps create a conceptual framework to identify opportunities for the future. Some key questions to help create this model for your company include:

- What are the current customer groups/Segments that we are serving?
- What needs are we meeting for these customers?
- What features or uses of our products are fulfilling these needs?
- Are there new customer groups with similar needs that are not being served?
- Can there be other uses of the product to fulfill other needs?
- Are there other technologies that need to be utilized to serve the needs of existing customers?

Reflecting on the Three Dimensions

The matrix is built to question the business model along three dimensions

- **Who?**

  Here, the idea is to completely identify and understand customer profiles of those segments being served. Once the segments are identified, work can be done to retain the segments that are most relevant. Segments can be individual customers, business customers, geographical location, sedentary or nomadic, role in the industry, social professional category, purchasing power or level of education among others.

- **What?**

  In this dimension, the objective is to identify the needs of the consumer that are met by the product. This is done by identifying and characterizing the solution (the product or service) in terms of its features that it brings to the customer segments identified in the “who” category. These features may include improved effectiveness or efficiency, better risk management, greater well-being among others.

- **How?**

  At this stage, those means are identified and characterized through which the highlighted features are manufactured and delivered to customers. These means or technology include manufacturing techniques such as a choice of technical processes or a specific form of organization, distribution techniques such as home delivery, retailers, wholesalers, and large distribution and provision technologies such as user license, remote operation among others.

Applications

The matrix can be used in a number of ways by an organization. Some of these uses include:

- Defining the business scope at three business levels including the corporate level, the business level and the lower organizational levels
- Describing and communicating changes in the business definition. These changes may usually be a result of the company’s offering moving through the product life cycle
- Describing and communicating the business of any competitors in the market. This definition can be extremely helpful to the organization to better understand who they are up against
- Analyzing the growth opportunities for a business in a systematic and organized way which can help keep a track of these and implement at the right times
- Describing and communicating the evolution of markets

EXAMPLE

Starting a Car Dealership

Whether starting a new business or evaluating an existing one, the Abell business definition framework is a useful tool for stating out all the relevant information in an easy to assess format. In this example, we will consider what would need to be considered if you set out to start a car dealership.

The three dimensions of the framework will need to be identified and listed down, beginning with an understanding of who the customer is, moving on to what need are we trying to meet for one or more distinct customer groups and finally the means needed by the company to manufacture and deliver the product to customers.

Who?

The first question to ask is who will the business be serving? Businesses may choose to serve one or two segments of the potential target market or a larger group of segments. It is important to correctly identify who you are serving as information is vital to ensure that the right need is met in the right way. Often, a variation of the product or a different marketing strategy is used to target various segments. Once the segments are identified. It is vital to dig deep and understand the dynamics of each segment and what motivates them to make purchase decisions. For a car dealership, some segment options include:

- The rich and powerful executive
- The working class hero
- The urban party goer
- The suburban family

What?

Once the segment has been identified, it is part of the study of this segment or segments to understand what need is motivating these people to make a particular purchase decisions. Some needs may be obvious as in the case of basic food items. While other needs may be unrecognized or unstated by the segment and need to be understood through research by the company. In the case of a car dealership, the need is vague and less obvious. If everyone wanted to buy a car to just meet the need to get from point A to point B, then the least expensive cars would be the ones everyone moved towards. Instead, some other reasons for buying a car may include:

- Peer pressure
- Status in an existing or aspirational peer group
- Sex Appeal
- Masculinity
- Peace of mind and safety
- Excellent driving experience

Some questions that a customer may ask themselves when buying a car may be among the following depending on their hidden desire.

- Is it efficient
- and luxurious?
- Is it spacious and reliable?

To put this into perspective, if you picked the working class hero segment to target, their obvious needs may be to get from point A to point B, the ability to off-road if needed and have the space to carry a lot of friends, tools or other items easily. Some of the less obvious needs or hidden desires may include the need to be seen as strong, honest and courageous instead of a wimp, not be seen as putting on airs or being posh and seen as a loyal, outgoing and manly man.

How?

By now you know that this segment requires cars that are powerful with big wheels, bold and spacious but not too fancy or expensive. Depending on the purchase power, the prime cars to sell would be muscle cars or pick-up trucks. As a dealer, your technology will be the systems needed to acquire these cars and market them in the right way, at the right time to the right people.

https://www.cleverism.com/abells-framework-for-strategic-planning/

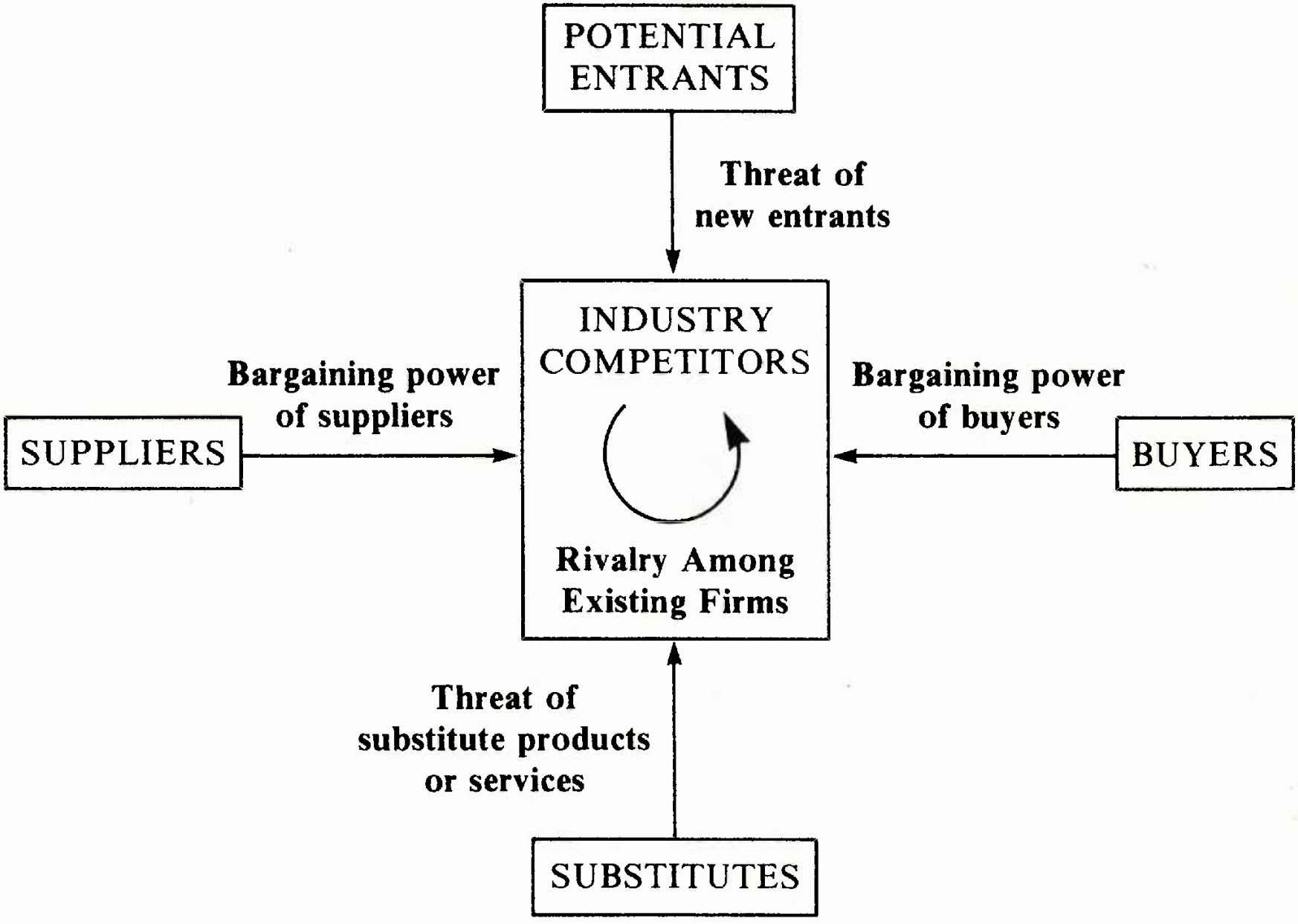


FIGURE 1-1. Forces Driving Industry Competition

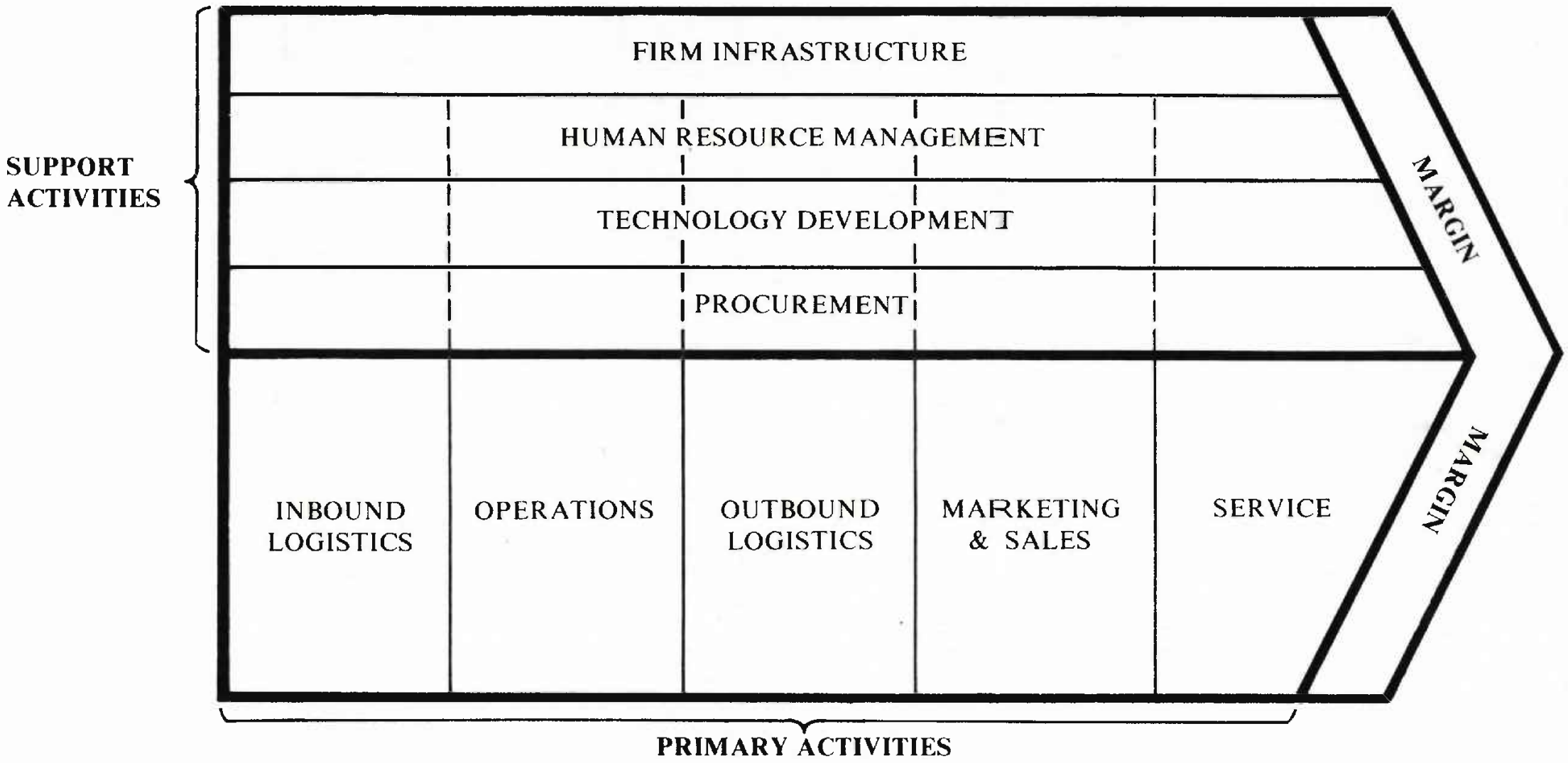


Figure 2–2. The Generic Value Chain

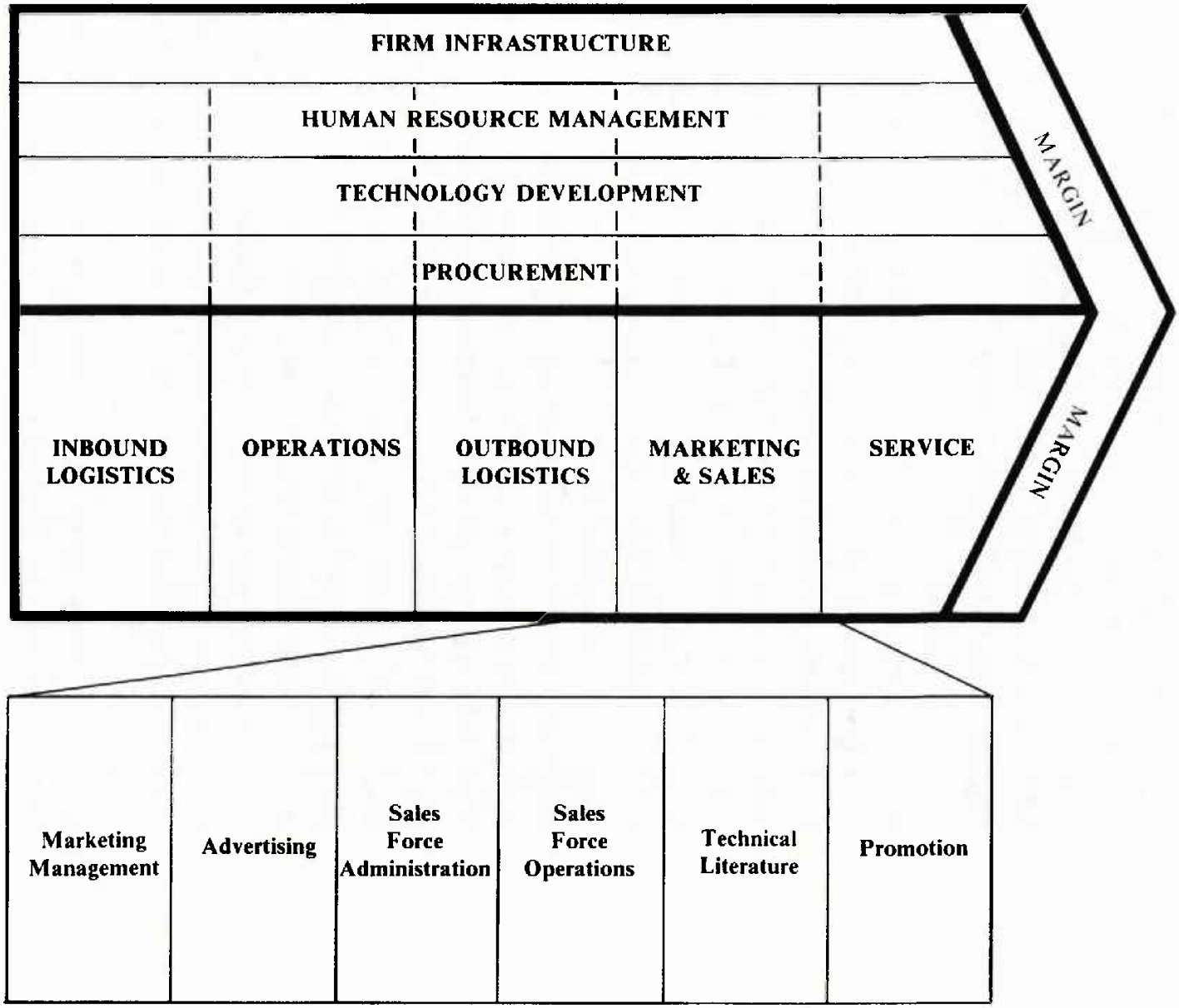


Figure 2–3. Subdividing a Generic Value Chain

COMMENTARY ON LONDON AMBULANCE SERVICE'S OUR STRATEGIC INTENT 2018/19 – 2022/23

APPENDICES

PERFORMANCE VARIATIONS WITHIN LAS GEOGRAPHIC AREA

Category A response times by CCG

Cardiac Arrest response times by CCG and outcomes by CCG and hospital

Stroke response times by CCG and LAS group station

STEMI response times by CCG and LAS group station

Major Trauma response times by CCG

LAS Category A response times: target 75% within eight minutes

Shaded worst (red) to best (green)

Website source: http://www.londonambulance.nhs.uk/about_us/how_we_are_doing/meeting_our_targets/latest_response_times.as

CCG Name	Inner / Outer London	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17
NHS Barnet CCG	OL	57%	66%	65%	63%	60%	59%
NHS Camden CCG	IL	77%	81%	82%	81%	76%	74%
NHS Enfield CCG	OL	52%	61%	62%	65%	62%	61%
NHS Haringey CCG	OL	54%	64%	64%	64%	63%	61%
NHS Islington CCG	IL	71%	75%	74%	76%	73%	69%
NHS Barking and Dagenham CCG	OL	58%	69%	66%	68%	65%	66%
NHS City and Hackney CCG	IL	67%	75%	74%	71%	71%	71%
NHS Havering CCG	OL	57%	66%	64%	64%	65%	66%
NHS Newham CCG	OL	66%	70%	70%	69%	67%	69%
NHS Redbridge CCG	OL	58%	66%	66%	67%	66%	65%
NHS Tower Hamlets CCG	IL	70%	77%	76%	74%	71%	69%
NHS Waltham Forest CCG	OL	57%	66%	66%	63%	64%	64%
NHS Brent CCG	OL	66%	74%	72%	72%	67%	67%
NHS Central London (Westminster) CCG	IL	78%	82%	83%	81%	80%	79%
NHS Ealing CCG	OL	66%	68%	70%	70%	66%	62%
NHS Hammersmith and Fulham CCG	IL	78%	82%	83%	80%	75%	76%
NHS Harrow CCG	OL	69%	69%	73%	71%	70%	68%
NHS Hillingdon CCG	OL	67%	69%	74%	69%	68%	64%
NHS Hounslow CCG	OL	69%	74%	69%	67%	66%	66%
NHS West London CCG	IL	77%	81%	81%	79%	76%	76%
NHS Bexley CCG	OL	64%	68%	68%	66%	65%	64%
NHS Bromley CCG	OL	65%	69%	71%	65%	67%	65%
NHS Greenwich CCG	IL	69%	77%	79%	72%	70%	70%
NHS Lambeth CCG	IL	79%	84%	84%	81%	76%	75%
NHS Lewisham CCG	IL	67%	74%	74%	69%	69%	70%
NHS Southwark CCG	IL	79%	81%	82%	79%	76%	73%
NHS Croydon CCG	OL	67%	71%	72%	69%	69%	66%
NHS Kingston CCG	OL	82%	87%	89%	85%	83%	77%
NHS Merton CCG	OL	83%	85%	85%	83%	78%	78%
NHS Richmond CCG	OL	72%	78%	81%	75%	70%	69%
NHS Sutton CCG	OL	77%	81%	80%	79%	77%	71%
NHS Wandsworth CCG	IL	78%	83%	83%	82%	76%	75%
out of London or missing map reference		0%	0%	0%	0%	0%	0%
LAS Total		68%	74%	74%	72%	70%	69%

London Ambulance Service NHS Trust

Cardiac Arrest Annual Report: 2016/17

October 2017

Produced by:

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Appendix 1: Patient characteristics, response times, and outcomes per Clinical Commissioning Group

Incident CCG*	Number of patients	Age (years)	Male %		Median response^ (mins)	Bystander CPR#		Presumed cardiac		Shockable initial rhythm		ROSC sustained to hospital		Survived to discharge+	
Barking & Dagenham	101	63	63.4%	(64)	07:58	66.3%	(53/80)	71.3%	(72)	10.9%	(11)	20.8%	(21)	5.9%	(6/101)
Barnet	200	69	59.0%	(118)	08:12	70.9%	(122/172)	76.5%	(153)	20.0%	(40)	19.5%	(39)	4.6%	(9/196)
Bexley	141	64	59.6%	(84)	08:01	66.0%	(70/106)	78.0%	(110)	22.0%	(31)	26.2%	(37)	7.9%	(11/139)
Brent	193	65	66.8%	(129)	07:37	73.3%	(118/161)	71.0%	(137)	17.1%	(33)	26.4%	(51)	6.7%	(13/193)
Bromley	162	67	56.8%	(92)	08:03	56.7%	(76/134)	79.6%	(129)	24.7%	(40)	33.3%	(54)	10.1%	(16/158)
Camden	129	60	66.7%	(86)	07:32	58.0%	(58/100)	77.5%	(100)	27.1%	(35)	28.7%	(37)	13.2%	(17/129)
Central London	139	63	75.5%	(105)	07:04	70.9%	(83/117)	74.1%	(103)	28.8%	(40)	36.0%	(50)	15.0%	(20/133)
City & Hackney	148	61	68.9%	(102)	07:24	53.2%	(66/124)	77.0%	(114)	23.0%	(34)	30.4%	(45)	12.4%	(18/146)
Croydon	195	64	68.2%	(133)	07:54	63.9%	(99/155)	76.4%	(149)	22.1%	(43)	29.7%	(58)	8.6%	(16/186)
Ealing	175	66	60.6%	(106)	07:49	72.2%	(104/144)	80.0%	(140)	19.4%	(34)	27.4%	(48)	7.0%	(12/173)
Enfield	183	66	61.7%	(113)	09:01	67.1%	(100/149)	85.8%	(157)	24.6%	(45)	21.9%	(40)	9.4%	(17/181)
Greenwich	138	62	69.6%	(96)	07:44	63.7%	(72/113)	70.3%	(97)	20.3%	(28)	31.9%	(44)	8.9%	(12/135)
Hammersmith & Fulham	89	64	66.3%	(59)	06:46	57.5%	(42/73)	70.8%	(63)	28.1%	(25)	24.7%	(22)	13.6%	(12/88)
Haringey	122	61	69.7%	(85)	08:21	57.4%	(54/94)	74.6%	(91)	23.8%	(29)	26.2%	(32)	12.5%	(15/120)
Harrow	130	68	66.2%	(86)	07:26	71.3%	(77/108)	82.3%	(107)	26.2%	(34)	38.5%	(50)	18.5%	(24/130)
Havering	157	70	63.7%	(100)	08:22	59.8%	(76/127)	77.7%	(122)	22.3%	(35)	37.6%	(59)	7.2%	(11/152)
Hillingdon	154	67	66.9%	(103)	07:13	64.0%	(80/125)	78.6%	(121)	21.4%	(33)	26.6%	(41)	7.8%	(12/153)
Hounslow	126	64	64.3%	(81)	07:28	57.0%	(57/100)	73.0%	(92)	23.0%	(29)	34.1%	(43)	11.3%	(14/124)
Islington	117	62	61.5%	(72)	07:23	64.3%	(63/98)	66.7%	(78)	18.8%	(22)	29.9%	(35)	10.4%	(12/115)
Kingston	83	67	62.7%	(52)	07:08	61.4%	(43/70)	73.5%	(61)	26.5%	(22)	28.9%	(24)	6.1%	(5/82)
Lambeth	167	64	65.9%	(110)	07:00	63.1%	(89/141)	74.9%	(125)	18.0%	(30)	25.7%	(43)	10.4%	(17/163)
Lewisham	130	63	62.3%	(81)	07:36	57.3%	(63/110)	76.9%	(100)	17.7%	(23)	35.4%	(46)	10.2%	(13/128)
Merton	85	66	63.5%	(54)	06:16	59.4%	(41/69)	76.5%	(65)	27.1%	(23)	37.6%	(32)	13.3%	(11/83)
Newham	149	60	63.1%	(94)	07:17	63.1%	(82/130)	76.5%	(114)	20.1%	(30)	33.6%	(50)	7.7%	(9/142)
Redbridge	160	66	58.8%	(94)	07:59	57.6%	(76/132)	76.3%	(122)	23.8%	(38)	28.8%	(46)	11.1%	(17/153)
Richmond	94	67	67.0%	(63)	07:21	68.4%	(54/79)	72.3%	(68)	27.7%	(26)	29.8%	(28)	6.8%	(7/91)
Southwark	142	60	60.6%	(86)	07:23	56.4%	(66/117)	76.1%	(108)	16.2%	(23)	28.9%	(41)	7.9%	(11/140)
Sutton	115	67	74.8%	(86)	07:38	67.8%	(59/87)	82.6%	(95)	32.2%	(37)	36.5%	(42)	12.4%	(14/113)
Tower Hamlets	118	59	62.7%	(74)	06:38	64.5%	(60/93)	64.4%	(76)	20.3%	(24)	26.3%	(31)	11.4%	(13/114)
Waltham Forest	154	64	61.0%	(94)	08:18	70.4%	(88/125)	78.6%	(121)	16.9%	(26)	29.2%	(45)	5.9%	(9/152)
Wandsworth	119	64	58.8%	(70)	07:31	60.8%	(62/102)	68.1%	(81)	16.8%	(20)	28.6%	(34)	6.9%	(8/116)
West London	118	64	61.9%	(73)	07:13	60.6%	(63/104)	81.4%	(96)	23.7%	(28)	30.5%	(36)	12.3%	(14/114)

** Patients conveyed to non- London CCGs (n=12) and where CCG was missing (n=3) are excluded from the table.*

^Overall response times are measured from the time the call was connected by the operator.

 # Figures exclude arrests witnessed by LAS staff.

+ Denominators exclude patients with unknown survival outcomes.

Appendix 2: Patients with ROSC sustained to hospital who survived to discharge

Hospital name	2014/15			2015/16*			2016/17		
	Number of patients	Survival with ROSC sustained to hospital+		Number of patients	Survival with ROSC sustained to hospital+		Number of patients	Survival with ROSC sustained to hospital+	
Barnet	77	21.4%	(6/28)	42	25.0%	(3/12)	41	12.5%	(2/16)
Barts Health^	-	-	-	124	53.5%	(54/101)	133	57.8%	(67/116)
Charing Cross	31	7.7%	(1/13)	40	18.2%	(4/22)	31	21.4%	(3/14)
Chelsea & Westminster	35	25.0%	(4/16)	33	35.7%	(5/14)	19	25.0%	(2/8)
Croydon	106	5.6%	(2/36)	123	10.4%	(5/48)	87	15.8%	(6/38)
Darent Valley	12	14.3%	(1/7)	10	50.0%	(2/4)	15	20.0%	(1/5)
Ealing	66	9.7%	(3/31)	54	12.5%	(3/24)	44	18.8%	(3/16)
Essex Cardiothoracic Centre	-	-	-	-	-	-	5	66.7%	(2/3)
Hammersmith	94	38.7%	(29/75)	76	53.8%	(35/65)	82	52.1%	(37/71)
Harefield	61	58.8%	(30/51)	30	56.0%	(14/25)	40	46.9%	(15/32)
Hillingdon	100	25.0%	(10/40)	83	25.6%	(10/39)	63	27.3%	(6/22)
Homerton	48	13.6%	(3/22)	43	4.8%	(1/21)	39	26.3%	(5/19)
King's College	192	40.7%	(44/108)	167	39.3%	(33/84)	189	41.7%	(45/108)
King George	75	16.2%	(6/37)	56	4.8%	(1/21)	47	0.0%	(0/17)
Kingston	58	16.7%	(3/18)	63	24.0%	(6/25)	56	8.3%	(2/24)
Newham	114	16.7%	(6/36)	77	6.7%	(2/30)	70	7.1%	(2/28)
North Middlesex	149	9.8%	(6/61)	119	8.0%	(4/50)	89	24.2%	(8/33)
Northwick Park	120	9.8%	(5/51)	126	22.8%	(13/57)	98	26.9%	(14/52)
Princess Royal	87	9.8%	(4/41)	66	17.9%	(5/28)	60	12.5%	(4/32)
Queen Elizabeth	150	12.5%	(7/56)	110	18.6%	(8/43)	101	18.6%	(8/43)
Queen's Romford	150	6.0%	(3/50)	129	4.7%	(2/43)	107	8.0%	(4/50)
Royal Free	110	41.2%	(28/68)	133	44.4%	(40/90)	132	47.7%	(41/86)
Royal London	122	20.0%	(12/60)	91	24.1%	(13/54)	78	22.6%	(7/31)
St George's	200	38.7%	(46/119)	183	39.0%	(41/105)	168	42.9%	(48/112)
St Helier	78	17.2%	(5/29)	41	21.4%	(3/14)	53	17.4%	(4/23)
St Mary's	81	30.0%	(9/30)	87	12.2%	(5/41)	76	23.7%	(9/38)
St Peters Chertsey	-	-	-	-	-	-	4	25.0%	(1/4)
St Thomas'	114	39.0%	(23/59)	116	47.5%	(28/59)	129	38.5%	(30/78)
University College Hospital	44	27.3%	(6/22)	35	26.1%	(6/23)	33	40.0%	(8/20)
Lewisham	80	19.0%	(4/21)	70	24.1%	(7/29)	51	11.5%	(3/26)
West Middlesex	79	23.5%	(8/34)	88	13.3%	(4/30)	66	0.0%	(0/24)
Whipps Cross	112	13.2%	(5/38)	86	17.1%	(6/35)	89	16.2%	(6/37)
Whittington	45	24.0%	(6/25)	39	21.4%	(3/14)	35	7.1%	(1/14)

** Patients conveyed to non- London hospitals (n=4) and one patient taken to Great Ormond Street Hospital are excluded from the table.*

^ Barts Health opened its Heart Centre at their St. Bartholomew Hospital site in April 2015.

+ Denominators exclude patients with unknown survival outcomes.

Appendix 3: Rhythm and survival per Heart Attack Centre for resuscitated patients with a STEMI

Heart Attack Centre	Number of patients	Initial rhythm			Survival to discharge[+]
		Asystole	VF/VT	PEA	
Barts Health	96	12.5% (12)	69.8% (67)	17.7% (17)	51.6% (48/93)
Essex Cardiothoracic Centre*	5	0% (0)	80.0% (4)	20.0% (1)	50.0% (2/4)
Hammersmith□	54	9.3% (5)	74.1% (40)	16.7% (9)	52.8% (28/53)
Harefield	26	7.7% (2)	84.6% (22)	7.7% (2)	42.3% (11/26)
King's College	53	13.2% (7)	73.6% (39)	13.2% (7)	45.7% (21/46)
Royal Free	53	13.2% (7)	69.8% (37)	17.0% (9)	54.7% (29/53)
St George's	55	5.5% (3)	81.8% (45)	12.7% (7)	51.9% (27/52)
St Peters Chertsey[#]	1	0% (0)	100% (1)	0% (0)	0.0% (0/1)
St Thomas'	25	12.0% (3)	72.0% (18)	16.0% (4)	50% (11/22)

** Essex Cardiothoracic Centre extended their catchment area and inclusion criteria in January 2017.*

□ *The total percentages do not equal 100% due to rounding.*

 # St Peters Chertsey accepted patients from the LAS in July 2016.

+ Denominators exclude patients with unknown survival outcomes.

London Ambulance Service NHS Trust

Stroke Annual Report 2016/17

October 2017

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Appendix 1: Incident information by area (as determined by the CCG of the incident)

CCG^	Number of stroke patients	Median Response time (minutes)	Median Journey times (minutes)	Percentage of stroke patients, who were potentially eligible* for thrombolysis, and arrived at a HASU within 60 minutes from 999 call**
Barking and Dagenham	289	8	11	65%
Barnet	487	10	22	44%
Bexley	401	8	25	34%
Brent	514	9	13	65%
Bromley	555	13	12	72%
Camden	343	8	10	70%
Central London	321	7	11	66%
City and Hackney	319	9	12	63%
Croydon	609	9	18	55%
Ealing	533	8	16	59%
Enfield	421	10	30	24%
Greenwich	343	9	23	51%
Hammersmith and Fulham	247	8	7	86%
Haringey	293	9	21	39%
Harrow	372	8	10	72%
Havering	487	8	10	81%
Hillingdon	536	8	20	57%
Hounslow	438	8	20	57%
Islington	304	9	12	66%
Kingston	243	7	17	60%
Lambeth	405	7	9	76%
Lewisham	369	9	16	60%
Merton	318	7	10	81%
Newham	334	8	15	59%
Redbridge	410	8	16	57%
Richmond	279	8	21	52%
Southwark	360	7	9	77%
Sutton	328	7	16	78%
Tower Hamlets	325	7	8	77%
Waltham Forest	346	9	23	45%
Wandsworth	350	8	11	70%
West London	335	8	11	70%

^ For 8 cases the CCG was unknown or outside London

* Patients whose symptoms were less than four and a half hours old when leaving the scene of the incident, or where the time of onset of symptoms was not documented by the crew.

**Health Care Professional admissions are not included.

Appendix 2: Care of patients by Group Station

Station Groups	Number of patients	Median response time (minutes)	Percentage of cases where on scene time was less than 30 minutes		Care bundle	Median journey time (minutes)	Percentage of stroke patients who were potentially eligible* for thrombolysis and arrived at a HASU within 60 minutes from 999 call**
			Overall from first attending resource	From arrival of conveying vehicle			
Homerton	654	8	42%	66%	97%	12	64%
Newham	809	8	43%	68%	96%	16	61%
Romford	915	8	48%	70%	97%	11	71%
North East	2,378	8	45%	68%	97%	13	66%
Camden	605	9	40%	62%	97%	12	63%
Edmonton	556	9	42%	66%	97%	27	32%
Friern Barnet	486	9	38%	62%	96%	23	42%
North Central	1,647	9	40%	63%	97%	21	47%
Brent	932	8	51%	71%	97%	12	70%
Fulham	587	8	41%	62%	97%	11	71%
Hanwell	720	8	44%	69%	98%	19	59%
Hillingdon	372	8	50%	72%	95%	20	61%
Westminster	238	8	39%	63%	98%	11	63%
North West	2,849	8	46%	68%	97%	14	66%
Bromley	861	8	44%	66%	97%	14	64%
Deptford	1048	8	45%	61%	97%	10	73%
Greenwich	664	8	39%	62%	98%	24	44%
South East	2,573	8	43%	63%	97%	14	63%
Croydon	460	9	52%	75%	97%	17	62%
New Malden	402	7	44%	63%	97%	19	56%
St Helier	501	7	50%	70%	97%	15	72%
Wimbledon	609	7	51%	72%	97%	13	72%
South West	1,972	8	50%	70%	97%	16	67%
PAS & VAS	550	11	37%	59%	96%	15	49%
Other LAS	253	7	47%	66%	86%	15	56%
LAS-Wide	**12,222**	**8**	**45%**	**66%**	**97%**	**15**	**62%**

* Patients whose symptoms were less than four and a half hours old when leaving the scene of the incident, or where the time of onset of symptoms was not documented.

** Health Care Professional admissions are not included.

London Ambulance Service NHS Trust

ST Elevation Myocardial Infarction Annual Report 2016/17

October 2017

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Appendix 1: On-scene times and care bundle provision by Clinical Commissioning Group of incident location

Incident CCG	Median (mean) on-scene times, minutes		Care Bundle			
	Arrival of first vehicle	Arrival of first conveying vehicle	Yes/ Exception		No	
			n	%	n	%
Barking & Dagenham	40 (42)	30 (32)	67	71.3%	27	28.7%
Barnet	39 (42)	31 (33)	123	79.4%	32	20.6%
Bexley	44 (45)	33 (26)	75	79.8%	19	20.2%
Brent	37 (41)	30 (33)	140	80.5%	34	19.5%
Bromley	45 (48)	35 (40)	101	75.9%	32	24.1%
Camden	37 (43)	32 (36)	66	76.7%	20	23.3%
Central London	39 (41)	31 (34)	84	72.4%	32	27.6%
City & Hackney	37 (41)	32 (33)	68	73.9%	24	26.1%
Croydon	40 (44)	31 (33)	108	65.1%	58	34.9%
Ealing	41 (43)	32 (34)	129	73.3%	47	26.7%
Enfield	39 (44)	29 (31)	97	73.5%	35	26.5%
Greenwich	44 (47)	39 (42)	81	76.4%	25	23.6%
Hammersmith & Fulham	40 (43)	33 (36)	61	80.3%	15	19.7%
Haringey	40 (45)	27 (32)	70	67.3%	34	32.7%
Harrow	40 (43)	28 (31)	78	77.2%	23	22.8%
Havering	40 (43)	29 (34)	81	68.6%	37	31.4%
Hillingdon	41 (43)	28 (31)	111	73.0%	41	27.0%
Hounslow	39 (42)	30 (33)	107	76.4%	33	23.6%
Islington	43 (46)	32 (35)	48	66.7%	24	33.3%
Kingston	38 (45)	33 (38)	37	74.0%	13	26.0%
Lambeth	36 (41)	32 (35)	64	68.1%	30	31.9%
Lewisham	42 (45)	32 (38)	68	69.4%	30	30.6%
Merton	35 (39)	30 (32)	41	70.7%	17	29.3%
Newham	38 (41)	32 (33)	83	67.5%	40	32.5%
Redbridge	40 (44)	30 (33)	126	78.8%	34	21.3%
Richmond	41 (45)	31 (36)	63	75.9%	20	24.1%
Southwark	42 (45)	37 (39)	82	75.2%	27	24.8%
Sutton	40 (45)	33 (36)	55	72.4%	21	27.6%
Tower Hamlets	39 (42)	32 (32)	83	74.1%	29	25.9%
Waltham Forest	40 (43)	31 (32)	75	73.5%	27	26.5%
Wandsworth	35 (38)	30 (33)	52	61.2%	33	38.8%
West London	35 (43)	35 (37)	76	73.8%	27	26.2%

Appendix 2: On-scene times and care bundle provision by LAS Group Station

LAS Group Station	Median (mean) on-scene times, minutes		Care Bundle			
	Arrival of first vehicle	Arrival of first conveying vehicle	Yes/ Exception		No	
			n	%	n	%
Homerton	38 (42)	31 (33)	165	75.7%	53	24.3%
Newham	39 (42)	31 (32)	199	71.1%	81	28.9%
Romford	40 (44)	30 (34)	203	74.1%	71	25.9%
North East	39 (43)	31 (33)	567	73.4%	205	26.6%
Camden	40 (43)	31 (34)	111	68.1%	52	31.9%
Edmonton	40 (45)	28 (32)	123	70.7%	51	29.3%
Friern Barnet	39 (44)	31 (35)	115	78.8%	31	21.2%
North Central	40 (44)	30 (34)	349	72.3%	134	27.7%
Brent	38 (40)	30 (31)	225	79.8%	57	20.2%
Fulham	39 (41)	31 (34)	146	77.7%	42	22.3%
Hanwell	38 (42)	30 (34)	169	74.8%	57	25.2%
Hillingdon	41 (44)	30 (32)	94	73.4%	34	26.6%
Westminster	40 (43)	35 (36)	70	73.7%	25	26.3%
North West	39 (42)	30 (33)	704	76.6%	215	23.4%
Bromley	43 (46)	35 (38)	149	70.3%	63	29.7%
Deptford	41 (44)	34 (37)	227	76.2%	71	23.8%
Greenwich	43 (46)	36 (39)	143	76.1%	45	23.9%
South East	42 (45)	35 (38)	519	74.4%	179	25.6%
Croydon	39 (45)	31 (34)	82	65.6%	43	34.4%
New Malden	39 (44)	32 (36)	77	71.3%	31	28.7%
St Helier	37 (41)	30 (33)	87	69.6%	38	30.4%
Wimbledon	36 (40)	33 (34)	77	68.8%	35	31.3%
South West	38 (43)	32 (34)	323	68.7%	147	31.3%
PAS & VAS	41 (45)	32 (34)	94	68.1%	44	31.9%
Other LAS†	38 (42)	29 (36)	44	73.3%	16	26.7%

† *Includes Hazardous Area Response, Special Events, Tactical Response Units and Training.*

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Appendix 2: Incident information by area (as determined by the CCG of the incident)

CCG	n	Blunt	Penetrating	Response time (mins)	Journey time to MTC (mins)	999 call connection to MTC (hour: mins)
		n	n			
Barking and Dagenham	113	68	42	11	20	0:46
Barnet	208	161	40	13	24	1:13
Bexley	208	104	20	13	28	1:40
Brent	257	173	76	12	17	1:11
Bromley	169	147	16	12	24	1:23
Camden	224	152	60	10	13	1:02
Central London	225	182	36	9	11	1:00
City and Hackney	234	157	71	10	10	0:55
Croydon	311	225	81	11	18	1:11
Ealing	271	201	62	11	20	1:15
Enfield	248	154	85	12	28	1:31
Greenwich	198	135	56	10	21	1:13
Hammersmith and Fulham	171	131	35	10	14	1:07
Haringey	221	140	75	11	21	1:12
Harrow	106	79	25	10	27	1:17
Havering	110	90	17	12	30	1:32
Hillingdon	215	184	25	11	28	1:29
Hounslow	194	145	40	10	27	1:31
Islington	177	126	45	10	15	1:07
Kingston	93	73	15	10	18	1:14
Lambeth	299	192	98	9	9	0:53
Lewisham	184	107	70	10	14	1:01
Merton	110	92	17	10	9	0:58
Newham	225	148	71	10	16	1:00
Redbridge	153	114	33	11	20	1:19
Richmond	122	87	31	11	24	1:17
Southwark	222	142	70	9	8	0:50
Sutton	119	102	16	11	15	1:11
Tower Hamlets	171	117	54	9	7	0:50
Waltham Forest	171	116	51	12	19	1:13
Wandsworth	212	154	45	10	10	0:59
West London	187	129	51	10	10	1:02

Notes:

- All figures above relate to patients transported in accordance with the major trauma decision tool.
- All times are median averages.
- Response time shown is from the time the 999 call is connected to the first LAS vehicle arriving on-scene.
- For 13 cases no incident CCG data was available and there were 4 patients attended by the LAS at locations in non-London CCG areas. These have been excluded from the table.