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Future Bright: The Long View

RSC Chemical Information and Computing Applications Group
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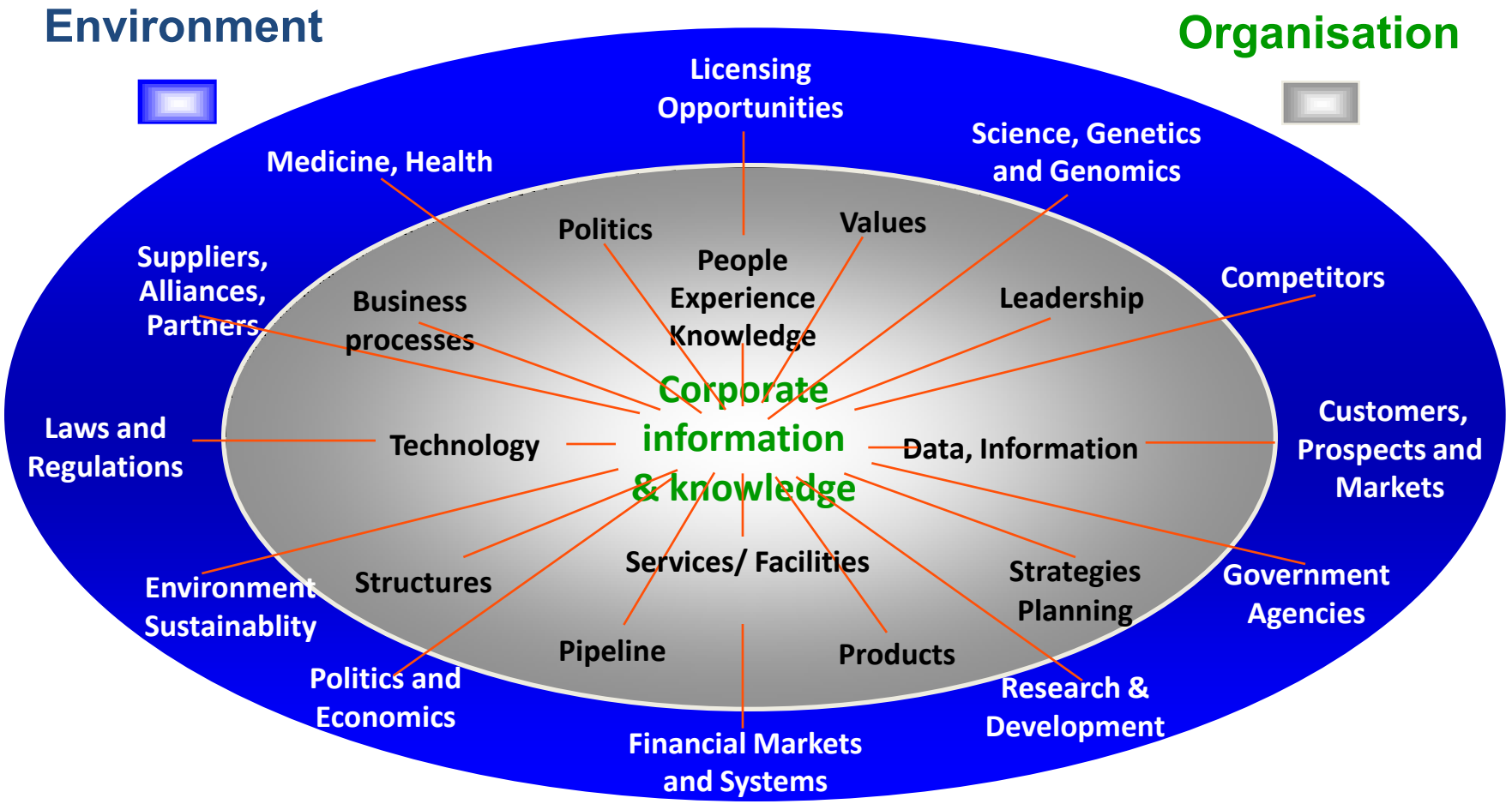
We live in complex information & knowledge environments



Information is now centre stage

- Technology change is unstoppable
- Information explosion will continue
  - Exploiting information is now accepted as a critical business capability – business and competitor intelligence is key
  - Even the public sector is into ‘big’ data
  - Using waste information is stimulating new businesses
  - Good information governance is essential
  - Information skills are in short supply
- Knowledge management isn’t finished yet
- Publishing is finally confronting the e-world
- Chemical information research is dynamic
  - New chemical information products and services abound.....
  - Chemistry is an important and influential discipline

The long view:

Looking back to go forward

Chemical Information Specialists - then and now?

- Aiding discovery, idea generation, validation via alerting and search
- SAR primitive – analysing internal/ external information
- IT remote, limited and primitive; manual processes
- Information specialists partner for innovation
- Chemistry: synthesis, analysis
- Work environment less pressured
- Value accepted

- Rapid innovation/development are the targets; information the competitive weapon
- QSAR - via integrated internal and external information
- IT pervasive, ever more sophisticated informatics tools
- Open innovation/company partnerships needed for success
- Chemistry: genomics, bio/chemoinformatics .....
- Work environment intensive, performance targets
- Value scrutinised (often!)

Evolving technical skills bases

- Chemistry and chemical information
- Structural coding – in-house, Ring code, Derwent, WLN
- Text storage, retrieval, indexing, thesauri, classification
- Source knowledge – alerting, searching – literature, patents, reports
- Manual information analysis and pattern recognition
- Compound management
- Simple data base design
- Emerging tools and systems
- R& D aims and processes, decision stages

- Chemistry and chemical information – other science
- Advanced structural representation
- Chemoinformatics, bioinformatics
- Reaction indexing/prediction
- Data bases, search tools
- Analysis and sense making tools
  - Data mining, pattern recognition,
  - Data Visualisation
- Bibliometrics, text mining, social mining
- Competitor Analysis, CI, BI
- Document management, ECM, DAM, Information Architecture, Records management, Archiving
- Internets, Intranets,
- Knowledge Management
- R&D & business direction, threats, processes, decision points

Personal skills and competencies?

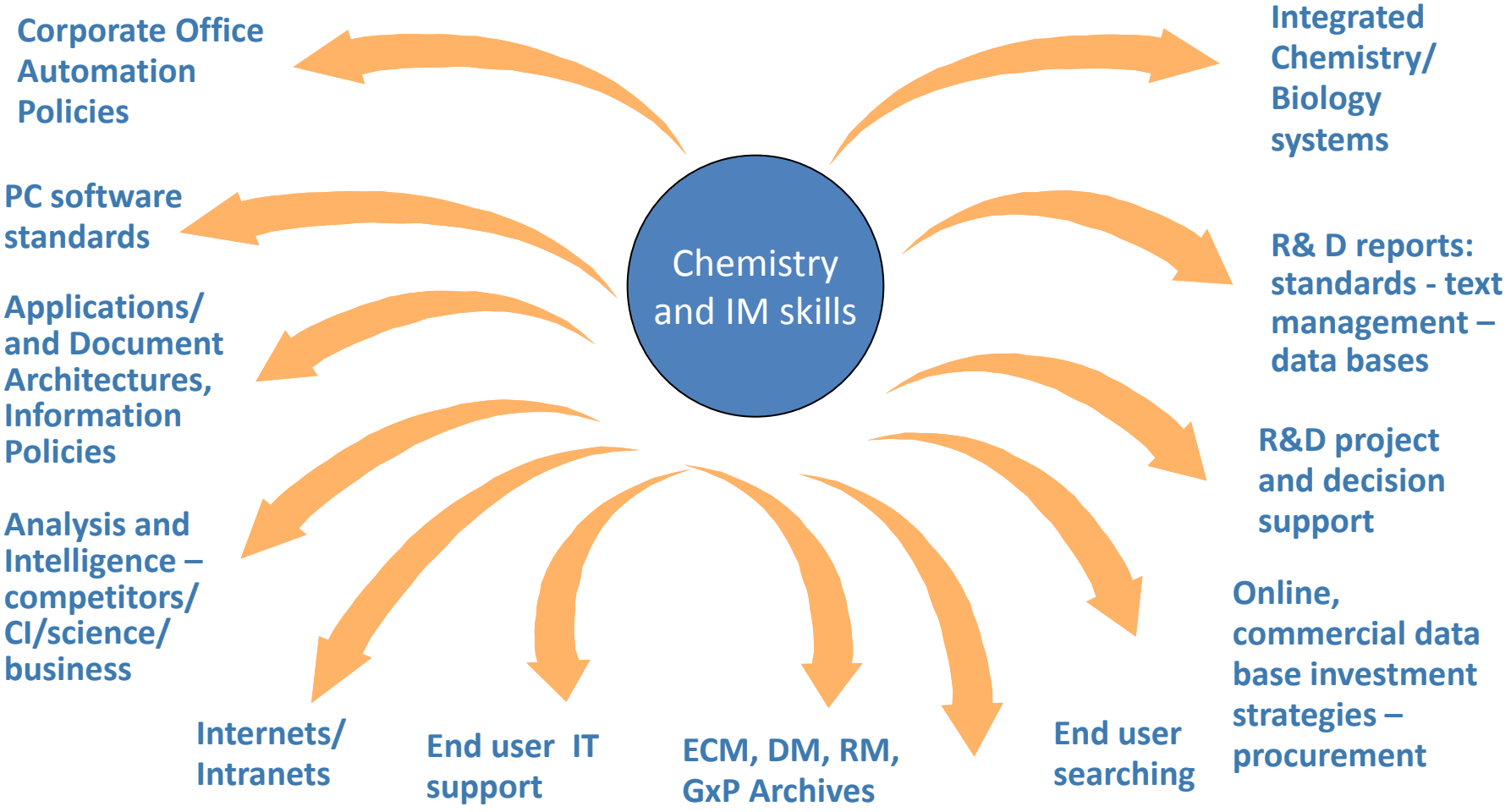
- Service ethic
- Business understanding
- Information passionate
- Cultivating relationships
  - Customers
  - Senior managers
- Communication, influencing
- Promotional skill
- Analytical skills
- Systematic
- Penetrative questioning
- Critical thinking
- Vision and creativity
- Opportunity spotting
- Optimistic curiosity
- Drive, passion for excellence
- Early IT adopters
- Risk takers?

- Breadth of business knowledge
- Partnership orientation
- Influencing
- Information skills transfer, training and education
- Business and process – information integration
- Business planning and financial management
- IT exploiters
- Presentation skills
- Change management, agents
- Anoraks and/or ambassadors
- Risk takers????

The long view:

OK – but so what??

Chemical information specialists have transformed their organisations!



The long view:

Now for today.....

Today – prospects and challenges

- Information is an increasingly important driver and success factor – as is knowledge - across all areas of the value chain
- Information explosion is unstoppable – the external environment has so much to exploit
- Essential to integrate information into business processes and decisions
- Potential for using information skills continues to expand
  - Data and text mining
  - Business and Compeiitor intelligence
  - Knowledge management
  - And chemical information
- But, everyone works with information – competition!
- Where do you want to focus? As an intermediary or a business user?

What do we want to be - today's opportunities?

- Explorers, visionaries, thought leaders?
- Information service and product providers – the front line troops ?
- Educators – information skills?
- Product and software developers? Chemical information research?
- Information governance, risk managers, IM, ECM, DM, KIM,RM experts
- Information Architects – designing environments? Web masters?
- Informaticians, Analysts – big data?
- Service brokers? Buying IM services as well as published information
- Business roles – business/ competitor intelligence, corporate strategy, communications, technology transfer ?
- Publishing? Abstracters and indexers? Editors? Product development?
- Business development?
- Market research? Sales executives?

Securing opportunities – a risk register - can you tick the boxes?

- Ensure current understanding of the business and the sector – the issues and challenges – where is information most needed, of greatest value?
- Cultivate strategic relationships and business partners
- Understand external trends and drivers for change
- Track information based research and development - identify new tools for sense making
- Agree your strategic vision
- Think transformation not evolution or protection
- Know your reputation – efficiency, effectiveness, relevance.....
- Get serious about survival
- **Demonstrate value – functional and personal**

The long view:

The importance of value .....

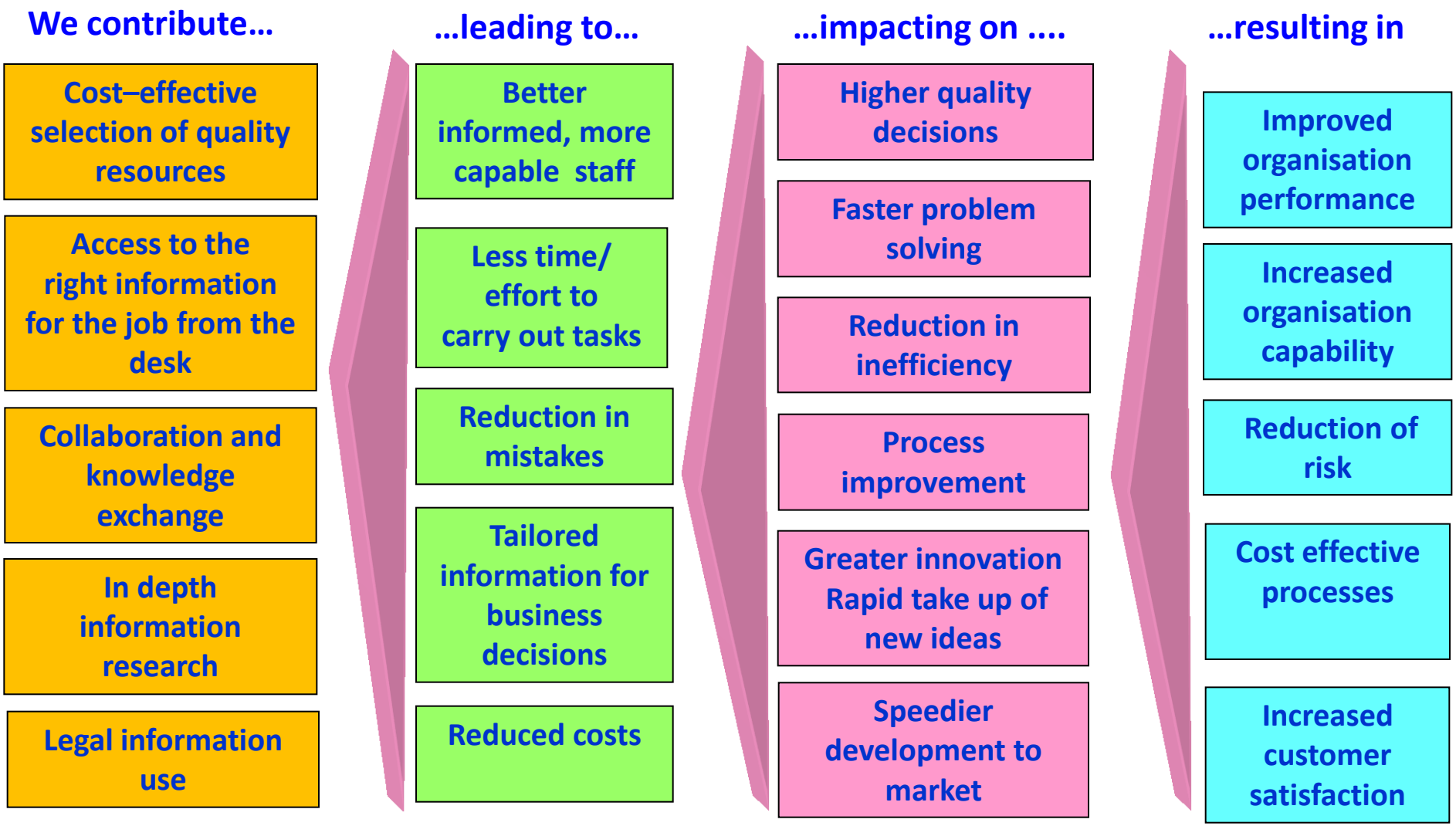
“No IM, KM or LIS function can assume its longevity”

“You can demonstrate activity but are you demonstrating value, impact, outcomes?”

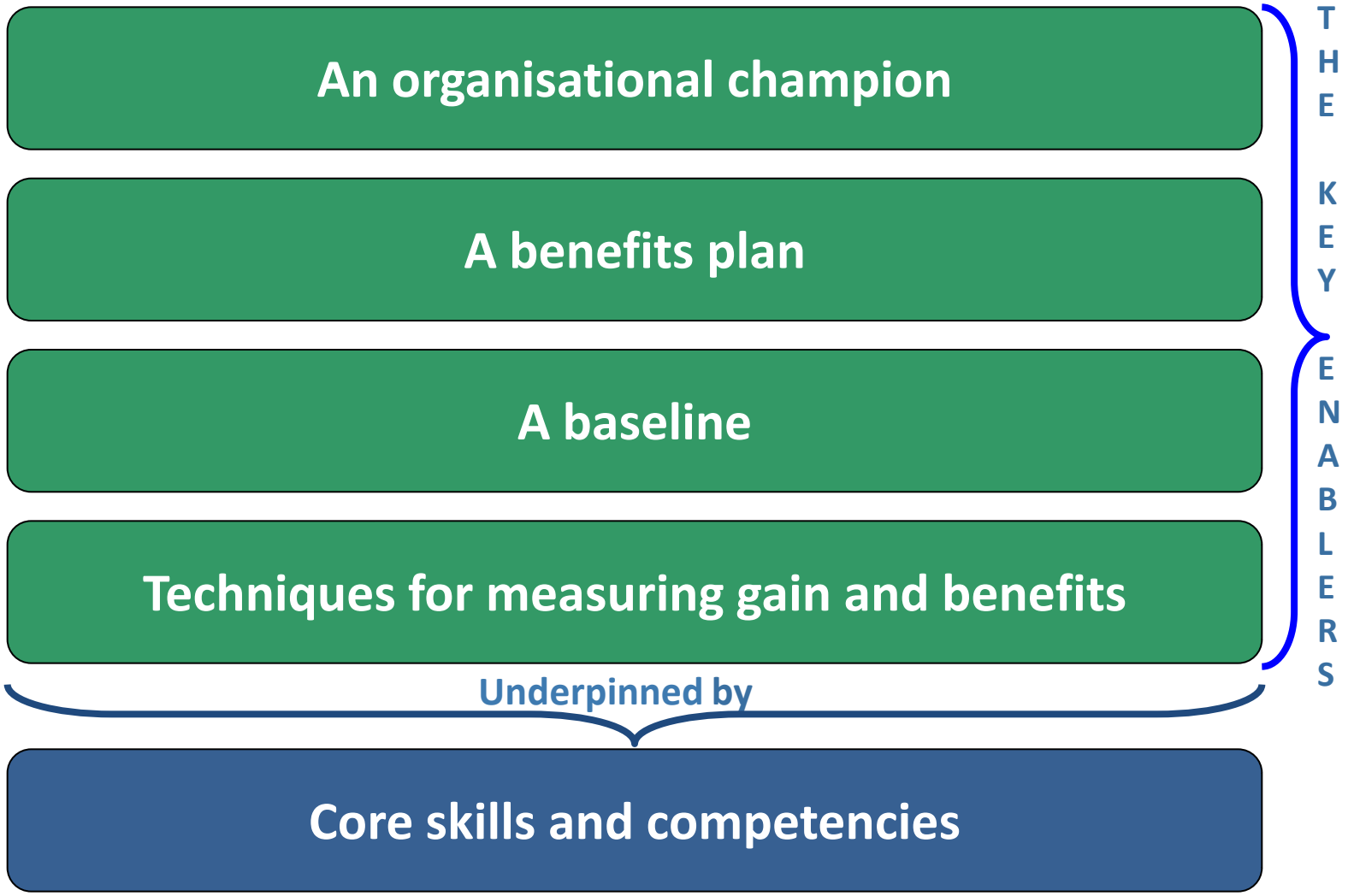
“It’s the customer that reaps the benefit – only they can assess the value”

“The people that you want to influence (from a budgetary/resource perspective) in the organisation may not be the people that use and value your service”

Know your value chain



A framework – for valuing a service



An organisational champion

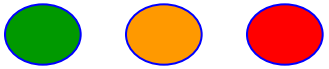
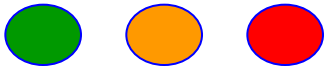
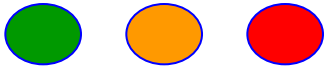
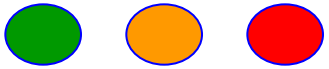
- Senior manager
- Information and knowledge aware
- Acts as champion/responsible owner
- Sounding board - service and value
- Prepared to be a partner
- Prepared to communicate value
- Strategic link between the information/knowledge service, the organisation and its stakeholders

The Champion

A benefits plan in outline

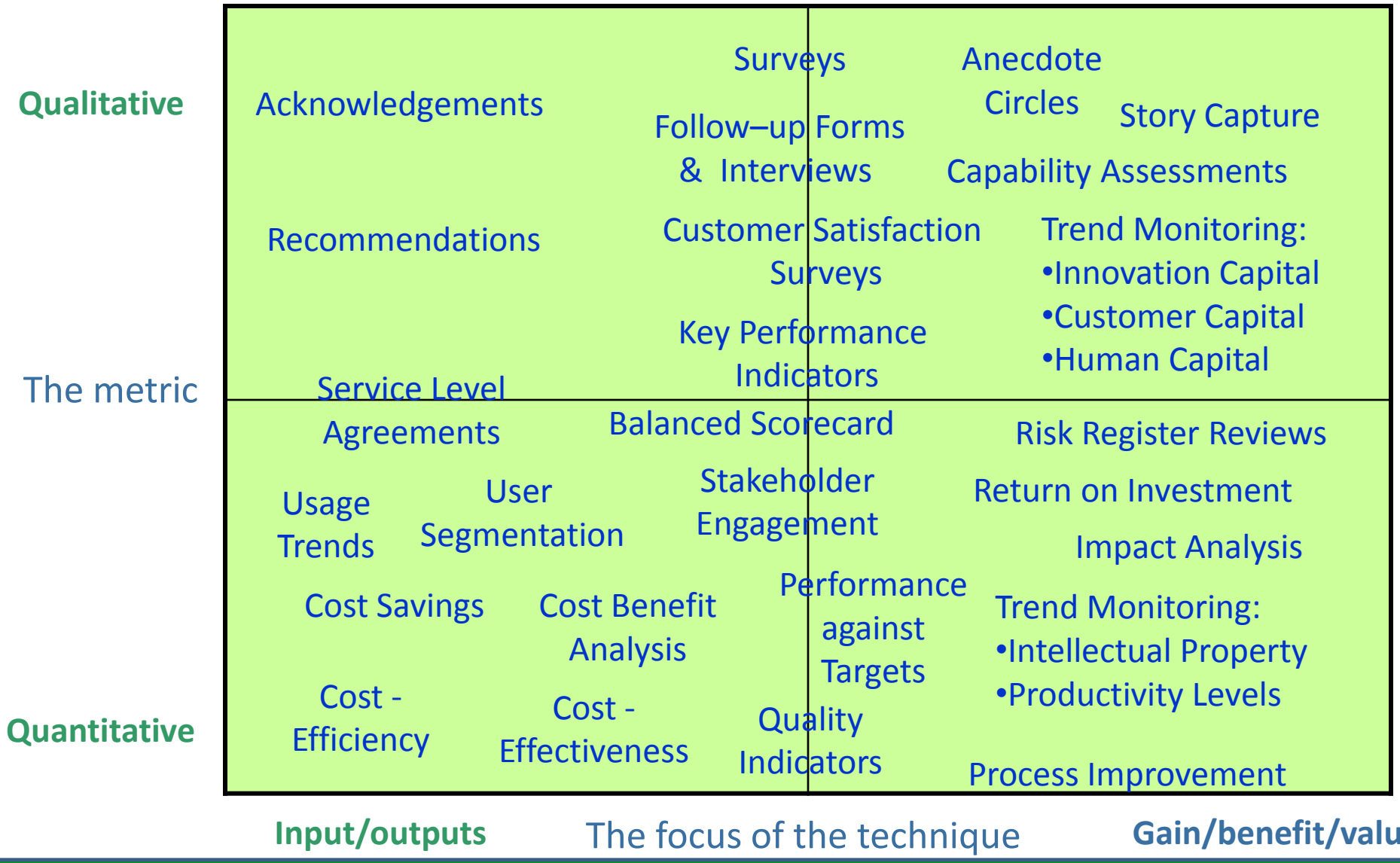
Element	Typical content
Vision and purpose of service	**Clear and concise statement of why the service is required, what it is intended to do, and its value proposition**
Service description	A service plan – a description of what it will look like, how it will be developed and delivered, its quality standards, and who will receive/use it
Benefits expected/sought by customers	**The advantage/profit/improvement/usefulness customers want to gain from the service**
Links to function/team/ organisational goals	Which function/team goals and targets will be enabled by the service? How do these link to the organisation's drivers, objectives, and goals?
Performance targets	Levels of service performance (targets and stretch targets) to be achieved or aimed for
Benefit measures	**What will demonstrate that the service is delivering the benefit(s) to customers and show its impact on functional/team/organisational goals? What is the best mix of quantitative, qualitative, tangible, and intangible measures?**
Benefit sources	**The sources of data (costs/facts), information (context/use) and knowledge (benefits realisation) for the measures**
Reporting	Frequency, format, communication channels, responsibility for reports
Responsibilities	Names of key business stakeholder/responsible information professional

A ‘traffic light’ baseline checklist

Key Checks	Baseline Statements	Assessment as at (date)
1	Shared understanding of the characteristics of the starting/current position – the basis from which to measure and evidence change	
2	Agreement on what data, metrics and stories illustrate these characteristics i.e. how they are currently measured, described or assessed	
3	The future position/desired state – the benefits and changes which the service is aimed at delivering	
4	Agreement on which characteristics will be the focus of measurement and the measures and measurement techniques to be used	

- **In place and fit to provide a baseline against which change and value can be evidenced**
- **In place but insufficient information available to agree the baseline**
- **Not in place and work required to gather information to inform baseline discussions**

Many techniques to assess value



The long view:

A personal view for today.....

Critical success factors for personal progress

- Pursue excellence
- Know your personality type – risk taker or conservative
- Be honest about your strengths and weaknesses
- Be realistic about your value – now and tomorrow
- Recognise your real inclinations and what these infer
- You have choices - stay allied to Chemistry or prepare/need to extend interests
- Gain new knowledge and skills – maintain a wide focus and a depth of knowledge - Don’t neglect technical skills
- The world is dynamic so prepare to adapt – and take risks
- Look where the light is

Discussion

- What do you think are the unique competencies of chemical information specialists?
- What opportunities exist in your organisations?
- How does your function demonstrate its value and impact?
- Where do you want to be in 5 years time?

Reading list (1)

- Big Data: the next frontier for innovation, competition and productivity, McKinsey Global Institute, 2011 http://www.mckinsey.com/Insights/MGI/Research/Technology_and_Innovation/Big_data_The_next_frontier_for_innovation
- Gartner: **http://www.gartner.com/it/page.jsp?id=1876914**
- EIU: Gamechanger http://www.progress.com/docs/campaign/articles/2011-economist_game-changer.pdf?cmpid=wa-fs-pom-econgamechanger
- Buck, G, The wheat from the chaff, http://www.iwr.co.uk/information-management-and-technology/3011206/The-wheat-from-the-chaff%E2%80%A6 (subscription required)
- Demonstrating value and impact - Online 2011 paper accessible via the publications/other resources section of http://ianwooler.wordpress.com/know-how-to/
- Checklist – are you at risk from http://www.cilip.org.uk/get-involved/advocacy/special-library-information-services/pages/default.aspx

Reading list (2)

- What is the return on investment of a University Library? http://www.sconul.ac.uk/events/agm2011/presentations/tenopir.ppt Dr Carole Tenopir, Professor of Information Sciences, Director of Research for the College of Communication and Information, and Director of the Centre for Information and Communication Studies, University of Tennessee

- Demonstrating the value of libraries to student achievement: linking loans to degree results http://www.sconul.ac.uk/events/agm2011/presentations/stone.ppt Graham Stone, Electronic Resources Manager, Huddersfield University

- Maximising use of library resources at the University of Huddersfield http://eprints.hud.ac.uk/7811/1/UKSG_Serials_paper.pdf White, Sue and Stone, Graham (2010) Serials, 23 (2). pp. 83-90. ISSN 0953-0460

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Thank you

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