



Case Study

The Fleet Information Management Unit

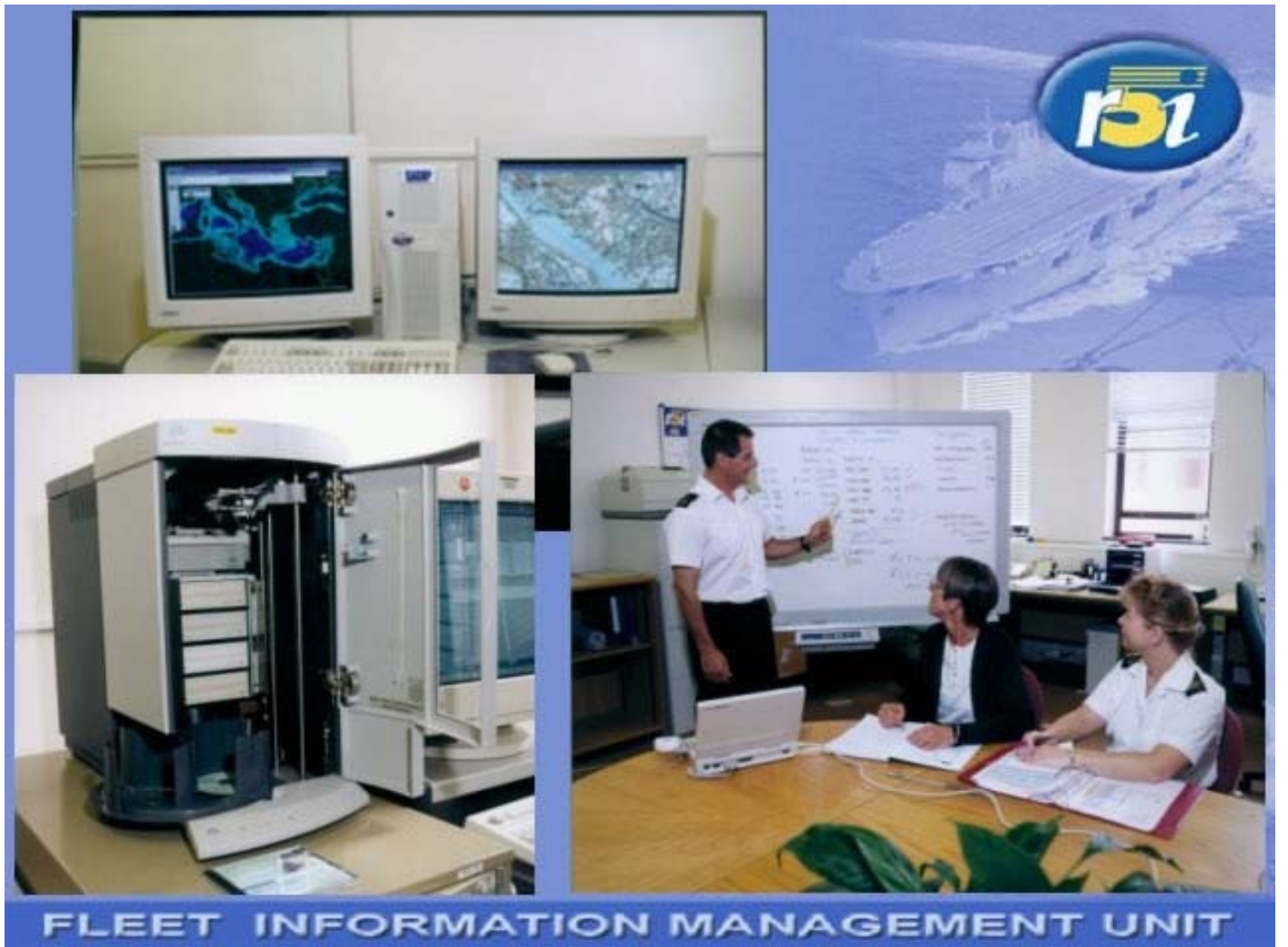


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1. Introduction

PRINCE2

PRINCE2 is a Project Management method. It is a structured approach, which can be tailored for use on any type or size of project.

Purpose of the Case Study

The Case Study has been written in response to requests for examples of PRINCE2 implementation from organisations considering using the method.

The Fleet Information Management Unit (FIMU)

FIMU is a Royal Naval organisation which supplies encyclopaedic data to the Fleet to support Maritime operations worldwide. They are a production unit and have selected elements of PRINCE2 to meet their needs. As such, they are a good example of how PRINCE2 can link into existing production and general management processes.

Acknowledgements

Thanks are due to the Officer in Charge of FIMU, Lieutenant Commander Anthony Knight and Mr Ian Warnecke, Quality Manager and their colleagues in the Unit, for their time and the information they provided.

2. Background

At the time this Case Study was compiled, HMS Fearless, an amphibious assault ship, which had been in service for 30 years made her final journey back into Portsmouth Harbour. When she started active service her Operations Room would have looked very much like those seen in classic films, dominated by boards and charts. Since then computerisation has advanced to the point where her replacement, designated a Landing Platform Dock (LPD), has a paperless Operations Room where all information is supplied and displayed electronically to support the operational deployment and tactical tasking of Royal Marine commandos moving from afloat to ashore.

The Operations Room is the centre for Command Mission Planning and Situation Awareness and is supported by Command Support Information Systems (CSIS), which hold mission essential information. CSIS are computers, which have specialised planning tools and software applications to enable a Commander to undertake operational planning for the deployment of forces. Their high-tech communications allow them to share plans with other Units. It has been tagged 'windows for warriors'. CSIS equipment is installed in all major warships and submarines and some shore establishments. FIMU supplies information for these systems, for both real time operations and pre-planned exercises. Both have a high demand for encyclopaedic data and referential information.

The range of information required to support Fleet operations, is vast and the source and format of the data is very varied. Sources are both military and non-military and include authoritative bodies such as the Defence Intelligence Service, Air Warfare Centre, United Kingdom Hydrographic Office and Military Survey. Source data may include books, maps, charts, electronic imagery, photographs and electronic documents and databases. FIMU maintains a corporate MOD database, known as the Defence, Command and Army Data Model (DCADM) and responds to requests for information for specific naval operations by bringing together all the data which is considered to be necessary and converting it into a common format for use by the CSIS planning tools and software applications. FIMU therefore sees its aim as: to deliver the Right Information, to the Right person, for the Right system, in the Right format, at the Right time. This is summarised as an abbreviated nickname R5I, which also forms the FIMU Corporate Logo.



3. The Business Case for PRINCE

FIMU was established in 1997 with 15 members of staff who were a mixture of Royal Navy and Civil Service personnel. Two production teams had been formed and there were plans for a third. The extremely heavy work demands and differences in working practices led to a breakdown in communications between the production teams and a general lack of unity throughout the department. The Unit exhibited little teamwork, was disjointed and suffered from a range of cultural and structural issues resulting from the interface between Service and Civilian staff, which was having an adverse affect upon the working environment.

FIMU is unique in that it has no counterparts amongst other military organisations and therefore has no blue print on which to base its development. In December 1998, a change of management highlighted the need for greater cohesion and a means of bringing the Unit together. What was needed was a method. PRINCE2 fitted the bill because it was well documented, well structured and thus saved the need to reinvent the wheel. All staff could relate to it and it provided a common way of working for staff from diverse backgrounds.

FIMU activities are directed by a military Chain of Command that emanates from the Fleet Headquarters and the use of PRINCE2 was seen as a way to satisfy, without duplication, the business criteria for accountability and management control.

4. Benefits

Since PRINCE2 was first introduced to FIMU in January 1999, manpower numbers have increased by 300% and there are now 52 staff in the Unit, a mixture of Naval staff, Civil Service staff, contractors and Naval Reservists in 4 data production teams. According to the Officer in Charge of FIMU, Lieutenant Commander Anthony Knight:

The Unit's organisational structure based on PRINCE2 has proved to be both robust and flexible. Throughout this ongoing and dynamic increase, PRINCE2 methodology has proved itself invaluable in keeping the production and support teams together, maintaining close co-operation and adherence to the concepts of quality and teamwork.

In particular, the Unit has benefited from the order and structure given to the business processes, the well defined lines of communication, superior team and task coordination and awareness of the importance of product quality, accountability and responsibility. The formal planning process has strengthened workload assignment and monitoring. Senior management has been reassured of on-going progress from the Stage Reports and the Risk and Issue Logs allow the Project Manager to head-off potential problems which would otherwise have meant sacrificing quality, time or incurring higher costs.

If PRINCE2 did not exist, we would have had to develop something like it. It captures corporate knowledge, provides a template for best practice and facilitates continuous improvement.'

Ian Warnecke, who was given the responsibility of introducing PRINCE2 at the production level, could see from the outset the benefit of a neutral way of working and how some aspects of PRINCE2, such as risk management, could address the internal problems caused by the heavy workload and different working practices in the department. This was helped by the fact that his job at the time gave him a good appreciation of all the FIMU activities. Some colleagues who did not have the benefit of the broader view were initially less convinced of the need to change. Ian feels that a corner was turned when Checkpoint meetings were established which gave a vehicle for communication and brought issues to the surface, generating action by the appropriate people. Previously, it being a military environment, people were inclined 'to cope' and 'get on with it' in a way that might not have been best overall.

POEW (Petty Officer Electronic Warfare) Kevin Stocker who took over the role of Production Manager after PRINCE2 had been introduced had a quick handover with no PRINCE2 training. He thinks of PRINCE2 as *'just something I do, part and parcel of my job. In fact I did not realise I was using it, because it has become a standard operating procedure for the way we deliver our formatted data products'*.

5. Tailoring PRINCE2

Initially, Lt Commander Knight and Ian Warnecke were trained to PRINCE2 Practitioner level and other personnel attended one or two-day in-house training courses. PRINCE2 was then evaluated to identify which elements would strengthen and enhance the work of FIMU and address problem areas concerning communication, coordination, accountability, responsibility, planning, risk management and feedback to senior management. Element selection was therefore tied very closely to perceived benefits.

FIMU does not conform to the normal project environment. It is a production unit. The delivery of data products to Fleet is continuous. In tailoring PRINCE2 they have therefore viewed a financial year as equivalent to a project and a financial quarter as equivalent to a stage in a project

The elements of PRINCE2 which were selected are described below. Appendix 2 contains a chart showing how PRINCE2 elements link to FIMU's production process.

5.1 Organisation

FIMU uses the PRINCE2 customer/supplier concept to clarify working relationships and set up Working Groups with customers. Internally, the PRINCE2 Project Management team structure was adapted to fit the production unit environment as shown in the chart in Appendix 1.

One unusual adaptation was in the use of the Project Assurance role. In PRINCE2, people undertaking a Project Assurance role do so on behalf of the Project Board if the Project Board feel they do not have the time or expertise to monitor the Project Manager and the project's progress sufficiently closely themselves. As such, the Project Assurance role needs to be independent of the Project Manager. The FIMU organisation chart in Appendix 1 shows Project Assurance having line accountability to the Project Manager. This was a conscious decision taken to fit the resources available when PRINCE2 was first being implemented, and establish the Project Assurance principle. The approach has worked well.

5.2 Planning

Production was previously run on a day-to-day basis, reacting as work arrived. The Production Manager acted as the co-ordinator but passed on the work to the production teams without a holistic perspective. It became clear that the introduction of formal production plans would enhance effort and improve efficiency. A Yearly Work Plan and a quarterly review based on the concept of a PRINCE2 End Stage Assessment were introduced.

The Yearly Work Plan is prepared and approved by the Project Board. It is linked with FIMU business and financial plans. It is kept as a strategic document and used as a baseline for control. As such, it performs a similar function to a PRINCE2 Project Initiation Document though it is presented in a different format consistent with other general management information.

A Stage Plan is produced on a quarterly cycle. In line with PRINCE2 guidance, it defines work to be done and identifies products, tasks, resources and timescales. Once the content of the Stage Plan is agreed by the Project Board it provides the basis for the individual Product Control Forms (see below).

5.3 Controls

Having decided the planning strategy, a system for controlling and monitoring production progress was needed. The first control developed was the Product Control Form (PCF), to identify and specify each product and the related tasks. Secondly, Checkpoint Meetings were introduced as the forum for team discussion, communication, progress monitoring and assessment of additional in-stage tasking. To summarise production effort, End Stage and End of Year Performance Reports were also introduced. The Project Board wanted facts and figures relating to total departmental output, and these reports provide that information. The final document introduced was the Lessons Learned Log. This would provide historical data to help in the generation of the End Stage and End of Year Performance Reports. These controls are described in more detail below

5.3.1 Product Control Form (PCF)

PRINCE2 uses the concept of products and product delivery to control and monitor progress. As described in Section 2, the FIMU product is a Data Product for Fleet. The FIMU Product Control Form combines the function of a PRINCE2 Product Description, which defines a product and its quality criteria and a Work Package which describes how the product is to be delivered. The PCF contains all of the details from the Stage Plan, as well as outlining responsibility, timescales, quality checks and controls. This was recently changed into electronic format with the implementation of Staffware, a workflow software tool. One of the major benefits of Staffware is that the production teams can monitor production progress. It also allows the Project Board to monitor workload and increase resources were necessary.

5.3.2 Checkpoint Meetings

A Checkpoint Meeting, which is the PRINCE2 progress monitoring mechanism, is held fortnightly. These meetings provide a forum for reviewing the current Stage Plan and discussion on progress, problems or issues. Any additional products required can be added to the Stage Plan at this point. Areas of conflict are identified and discussed with entries to the Issue and Risk Log made as appropriate.

5.3.3 End Stage Report

At the end of each quarter the Project Manager produces an End Stage Report and sends it to the Project Board. It contains details of all delivered products, products additional to those in the original Stage Plan and ongoing work plus details of planned work that was not completed to schedule, with reasons and revised schedule.

5.3.4 End of Year Performance Report

At the end of each production year, a report is submitted to the Project Board which is the equivalent of PRINCE2 End Project Report. This report summarises the End Stage Reports and provides information on the whole year's work. This information is also used to support annual financial reports and justifications for future budgetary requests.

5.4 Stages

Using PRINCE2, a project is broken down into manageable stages, which may vary in length on the basis of management decision points. Because it is a production unit, FIMU decided that they would view each quarter of the financial year as a stage.

5.5. Management of Risk

It was decided that the PRINCE2 approach to Risk Management was appropriate and manageable and a Risk Log is in use. It is accessible and can be updated by all production teams so any risks, which could affect the production process can be clearly identified. It is reviewed at every Checkpoint Meeting. In this way action can be taken immediately. The Project Board are updated on the status of the Risk Log prior to the start of each quarter.

5.6. Quality

Given the nature of FIMU, where information incorrectly supplied could be a threat to life, quality control is essential. In PRINCE2 quality checking is an integral part of product production, not an afterthought. Use of the PCF ensures that quality checking is incorporated into the production process in FIMU.

Ian Warnecke has been appointed Quality Manager. Prior to this, quality checks were performed on an ad-hoc basis at peer level. Now, in conjunction with the production teams Ian has developed a Quality Policy and a Quality Plan.

The Quality Policy ensures understanding of the quality function and the relationships between the Quality Manager and the production teams.

The Quality Plan is a co-ordinated plan which provides the teams with details of which type of product quality checks are to be carried out and by whom. These details are incorporated into the PCF and made specific to the product in hand, which provides a permanent record of quality checks conducted before the data product is approved as 'fit for purpose'.

A Quality Log is used to track the quality process and ensure the quality checks take place.

Ian now has a remit to introduce the EFQM (European Foundation for Quality Management) Excellence Model. He sees parallels with PRINCE2 in that the Excellence Model is not prescriptive. Its purpose is to help an organisation 'audit' itself in respect of its culture, structure and strategic processes and introduce improvements.

Ian is starting to apply the approach to the Unit's use of PRINCE2. He has started to ask the question 'is PRINCE2 working for us?'. His initial assessment is affirmative. In particular, because PRINCE2 has supported the expansion of the unit from 15 to 52 people and the elements of PRINCE2 which FIMU selected are still working effectively after 2 years though they are in need of some fine-tuning. The review has also highlighted the need for training people who were not in at the beginning and for new recruits so individuals get a wider view of the efficiencies gained by using the method and to avoid knowledge being lost.

The Quality Plan has been expanded to cover all aspects of the production processes and personnel issues. In this way a holistic view of quality will be taken across the whole organisation and not just of the product

5.7 Configuration Management

People new to PRINCE2 are sometimes put off by the term 'configuration management' and do not grasp the concept which is vital to successful project management. Configuration Management has a high profile in FIMU to the extent that it appears in their mission statement, which is:

"To provide all operational information systems delivered to Fleet with validated encyclopaedic data for the purposes of software acceptance, initial fill and subsequent update, all under strict configuration management control."

The purpose of configuration management is to identify, track and protect (from unauthorised changes) products, which are being developed to ensure the integrity of the final deliverable.

Clare Saunders, Data Configuration Manager for FIMU, says:

'We obtain data from a host of authoritative sources; they are collated and converted into a combined data product for Fleet use. If you take the example of information for a naval exercise in the Caribbean, you may need to refer to a variety of books, maps and charts to find information and data about the landing beaches, port facilities, town infrastructure and military forces.'

First of all we examine the books for any updates, which might affect any of the existing FIMU products, which contain the book information and ensure the affected product is updated.'

We then establish the distribution list for the new product. We have over 60 customers with one of two versions of CSIS operating systems: Versions 4 and Version 6. In between the quarterly data updates to our customers, some ships are provided with interim data releases for specific activities. This means that there can actually be up to 6 different releases of the Version 4 and Version 6 data at sea at any one time, until the next quarterly update which will bring all customers up to the same issue status. Configuration Management ensures that we give the right ship, the right data product, on the right media, in the right format, at the right time.'

Clare sees strict configuration management as 'give nothing to nobody without the right authority'. As the Configuration Manager she insists on precision and accuracy and admits she sometimes puts peoples backs up 'if you want friends don't go into configuration management'. A bespoke configuration management database has been developed based on spreadsheet software and this provide the management reports to allow FIMU to audit and track it's data product distribution.

Configuration Management in FIMU predated PRINCE2. Clare was one of the first people to be trained in PRINCE2 in 1999. She remembers the assessment of how to implement PRINCE2 concentrating on business processes and business objectives. Her perception is that FIMU took 'bits from PRINCE2'. She believes the way FIMU have implemented PRINCE2 has helped FIMU focus more on customer requirements, clarify priorities and meet target dates.

5.8 Change Control

In FIMU, change control is seen as an intrinsic part of configuration management. However, a study is underway to check the feasibility and benefit of separating these two functions. FIMU does use an Issue Log (in PRINCE2 change control operated through a project issue mechanism). It is accessible and can be updated by all the teams and is reviewed at each Checkpoint Meeting and brought to the attention of the Project Board at end stage.

6. Lessons Learned

Asking staff at FIMU about lessons learned when introducing PRINCE2 elicited the following remarks:

- Try and relate PRINCE2 instruction to the actual work environment. This helps people understand the new concepts much more easily and quickly.
- Be pragmatic. In order to achieve the qualification PRINCE2 can be taught in a 'purist way'.
- It can look alien at first. Try to look beyond the line diagrams and action boxes to see how things come together.
- Do not be afraid to experiment with the method.
- Adapt PRINCE2 to fit your organisation and not the other way round.
- Know your business processes before you try to apply PRINCE2.
- Pick out what will help you.
- Be clear about the business case for the project and do not lose sight of that.
- People have a fear of the new and getting them to understand the method is not always easy.
- Knowledge is lost if there is no continuity in key positions, new staff need PRINCE2 induction.
- PRINCE2 does not apply to everything, but it is a management tool that is worth investigating.

7. About PRINCE2



PRINCE2 is a Project Management method covering the organisation and management of projects. It is designed to be tailored for use on any type of project.

Although PRINCE was originally developed for the needs of IT projects, the latest version, PRINCE2 which was released in October 1996 and a major update was released in 2002, is a generic, best practice approach to meet the needs of the whole organisation.

It is widely used in both the public and private sector and is the de-facto standard for project management in the UK. PRINCE2 is increasingly being used in several countries outside the UK, including USA, Australia, New Zealand, The Netherlands, France, Italy, Hong Kong, South Africa, Croatia and Poland.

PRINCE2 is in the only public domain method and therefore free to use. It is unique in being an off-the-shelf practical method, which is well supported by development, and training resources.

PRINCE2 was designed and developed by a group of Project Management specialists under contract to OGC (see below) and over 150 public and private sector organisations were involved in reviewing the quality of the method as it was produced.

PRINCE2 stands for Projects in Controlled Environments i.e. it shows how to set up a controlled environment in which to run a project well.

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The Stationery Office is the official publisher of PRINCE2. They can be contacted on 0870 600 5522 or by visiting www.tsonline.co.uk.

8. OGC Observations



Office of Government Commerce

This Case Study highlights the (often forgotten) underlying principle of PRINCE2 that it is a 'common sense' management tool. FIMU has been able to successfully extract relevant tools and techniques from the method and apply them to their operational environment.

The benefits that a common framework can bring are well demonstrated here and are re-enforced by the message that FIMU staff are using the approach 'because it works'.

Many projects ignore or play down the role of Configuration Management (perhaps because it is seen as too bureaucratic) but it is enlightening to see the significance FIMU places on this technique for controlling their products. Similarly, FIMU are making effective use of the Quality Plan.

A key message from this Case Study is the way FIMU have applied the PRINCE2 concepts of Stages, Checkpoints, and combination of Product Descriptions and Work Packages, to provide a more holistic framework for their teams. Although built around time-based reporting (as opposed to project milestones), these concepts are working well together and providing a consistent communication and management reporting regime.

As with all business process development, FIMU should continue to challenge their ways of working, looking for further improvements, and building on their continuous improvement approach. Keeping standards up-to-date is an important criteria for encouraging their continued application.

9. About APMG



In partnership with OGC, The APM Group Ltd (APMG) provides PRINCE2 training accreditation and an examination scheme. They maintain a list of Accredited Training Organisation and Registered PRINCE2 Consultants.

Richard Pharro, Managing Director of The APM Group Limited commissioned this Case Study in response to a demand from many organisations seeking help on understanding the relevance of PRINCE2 to their business. Richard comments:

'We are very grateful to providers of Case Study material. In this case Lieutenant Commander Knight and his colleagues show us an imaginative use of PRINCE2 in an operational situation which is probably as clear an illustration of it's flexible nature as could be expected. The lessons learned have been learned by many organisations and show that success requires a pragmatic and human approach rather than a slavish and purist attitude to the method's implementation.'

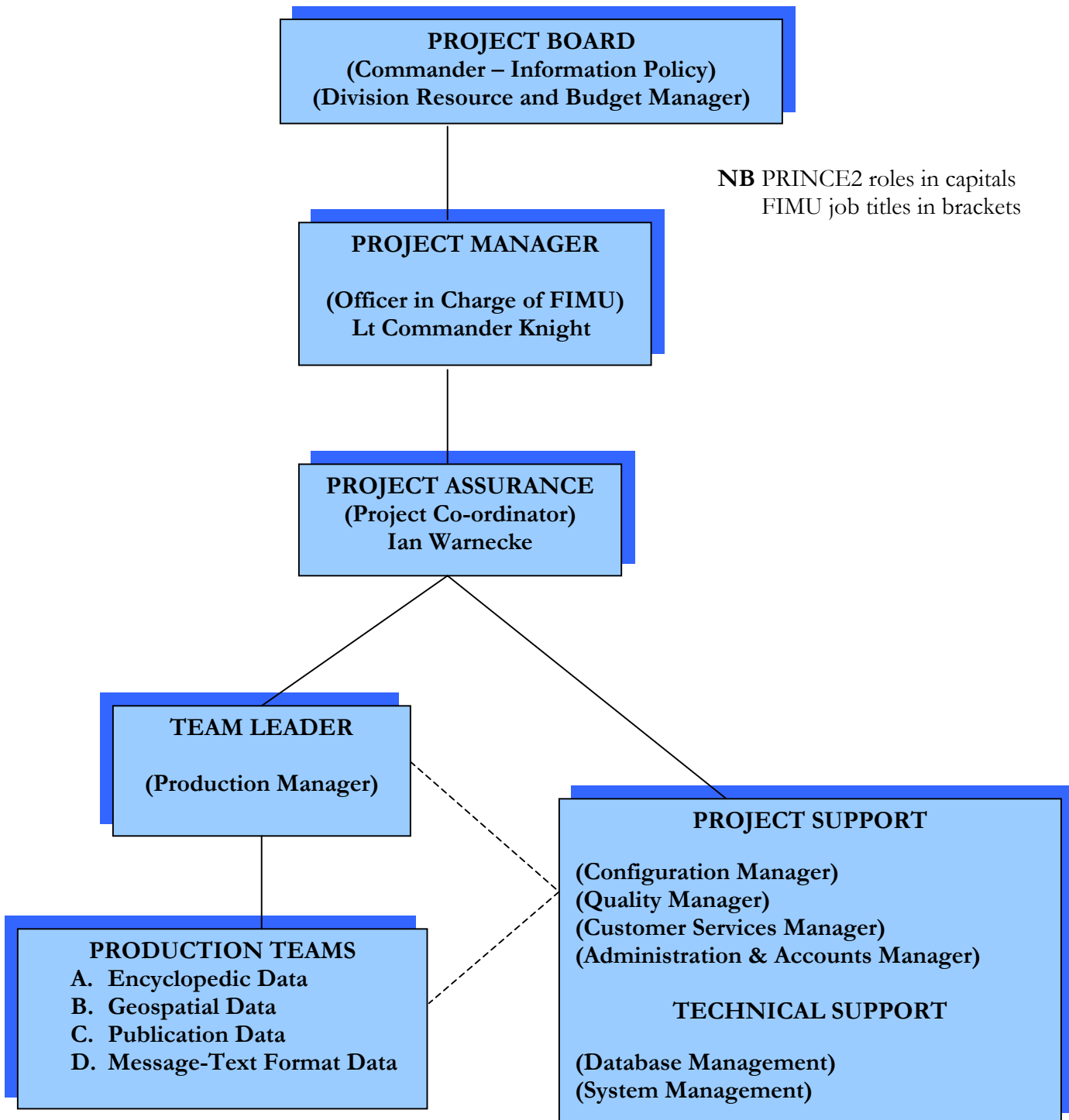
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PROJECT TEAM STRUCTURE



NB PRINCE2 roles in capitals
FIMU job titles in brackets

Line of authority ———
Line of communication - - - - -

APPENDIX 2 - PRINCE2 ELEMENT LINKAGES

Taking the various appropriate aspects of the PRINCE2 Project Management Methodology and adapting them to FIMU's production process have formed the Project Plan.

