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The Provision of Incentive Schemes

Spin out to Success

Government researchers are turning entrepreneur and blazing a trail to the market with new technology and new businesses. Their success shows that the UK can still lead the way taking ideas from the laboratory to factory. New spin-out companies are being formed at a faster rate than ever, giving a boost to the UK economy and giving these scientists and technologists a chance to share in the success of their ideas and inventions.



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HM Treasury Guidance

The Provision of Incentive Schemes Additional Information for PSREs and NHS Trusts

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A non-prescriptive guidance note for Public Sector Research Providers including Departmental and Non-Departmental Public Sector Research Establishments, NHS Hubs and NHS Trusts.

Prepared by Partnerships UK on behalf of HM Treasury

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BACKGROUND

Staff incentive schemes are currently firmly in line with government policy both as part of the wide “Modernising Government” agenda and as an integral part of the Baker recommendations for the science community. They exist to promote an increasingly entrepreneurial culture in the public sector. A well implemented scheme will encourage and incentivise staff to make better use of publicly held assets in line with the Wider Markets Initiative, or encourage the development of innovative products from the UK’s strong science base.

Incentive schemes can, however, be divisive and care should be taken to ensure that the incentive scheme put into place by a body is right for the organisation and the staff within the organisation. The views of external stakeholders should be accommodated where appropriate.

There are currently several pieces of guidance available to assist the public sector generally¹, and Public Sector Research Establishments (PSREs) in particular². This note is not a replacement for these documents, and they provide an excellent starting point when considering the creation of a staff incentives scheme. This note aims to build on the guidance provided to enable public sector bodies to establish successful incentive schemes.

Key Issues

The key aspects to consider when creating or modifying an incentive scheme are:

1. What do I want to incentivise my staff to do?
2. What mechanism will work for my organisation?
 - 2.1. What measurement method should I use?
 - 2.2. What reward method should I use?
 - 2.3. Who should I reward?
3. How do I ensure all stakeholders are happy with the outcome?
 - 3.1. How do I manage conflicts of interest?
 - 3.2. At what level should I reward?
 - 3.3. How do I ensure fairness?

These questions are explored in the subsequent sections of this document.

SECTION 1 THE PURPOSE OF THE INCENTIVE SCHEME

What do I want to incentivise my staff to do?

The purpose of an incentive scheme will vary across organisations. The implementation of a scheme can encourage innovation, revenue generation or savings depending on the nature of the scheme. Other motivators include:

- Demonstrating the value associated with knowledge transfer and technology commercialisation;
- Providing financial and non-financial rewards to staff to reward performance over and above any performance related schemes currently in place;
- Providing an environment which encourages and rewards innovation;
- Assisting with the retention and motivation of staff.

Further information on encouraging an innovative culture can be found for example in Reference 3.

SECTION 2 CHOICE OF MECHANISM

What mechanism will work for my organisation?

The choice of the type of incentive scheme is contingent on many factors and the final decision to adopt can be a subjective decision. The impact on finances from the reward mechanism chosen can introduce some objectivity, but the final decision requires a subjective and iterative process. A framework that can assist in the development of an incentive scheme is shown in Figure 1. For the boxes shaded blue in Figure 1, it is useful to have a framework to assist such subjective decisions.

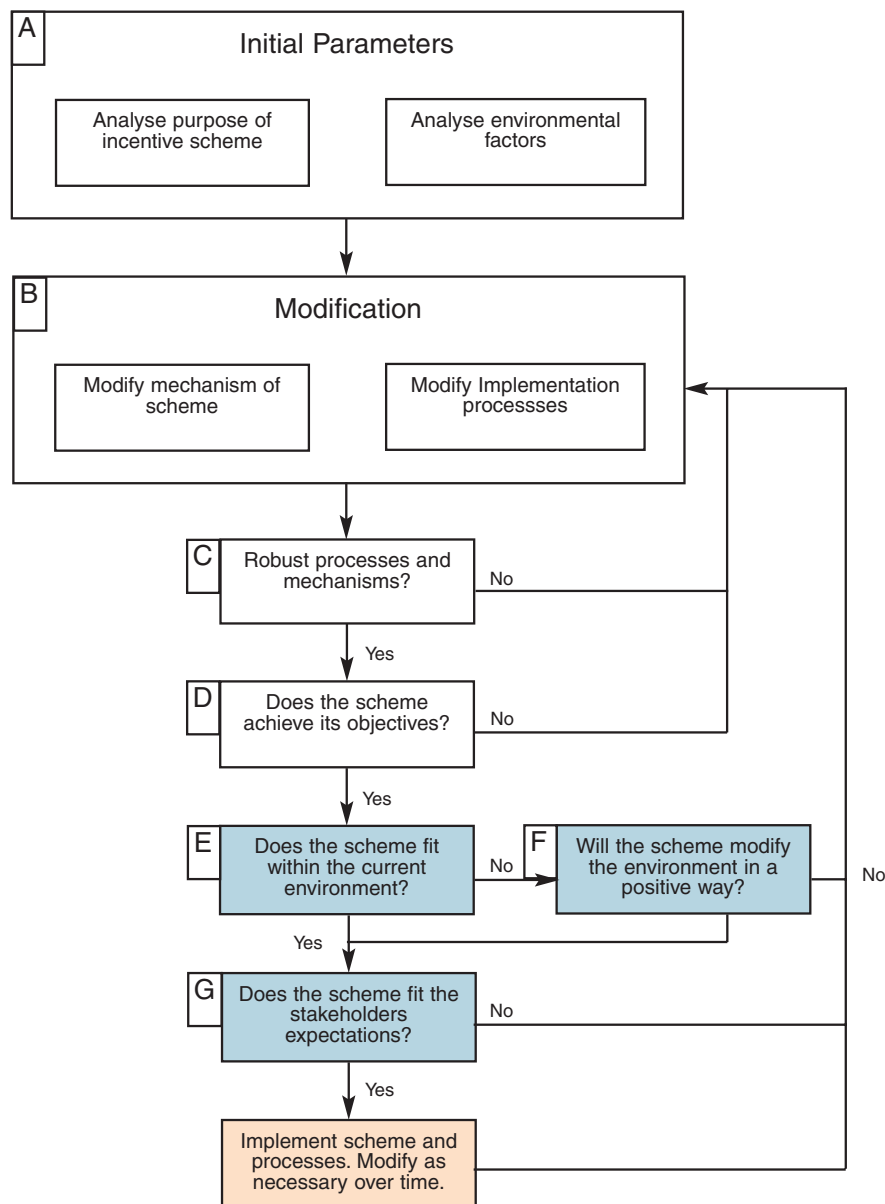
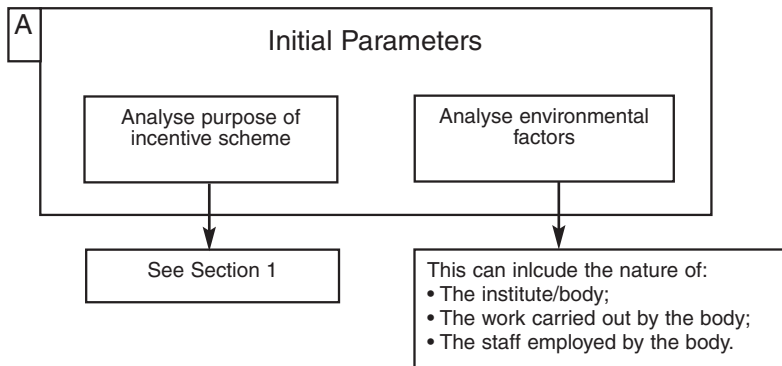


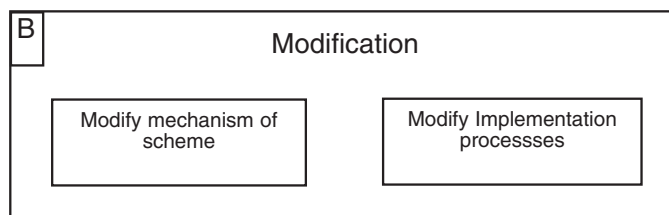
Figure 1 Suggested procedure for the generation and implementation of an incentive scheme

We can consider each element of Figure 1 in turn.

A. Initial Parameters



B. Modification



Possible mechanisms are outlined in the subsequent sections. Four elements subsequent the scheme.

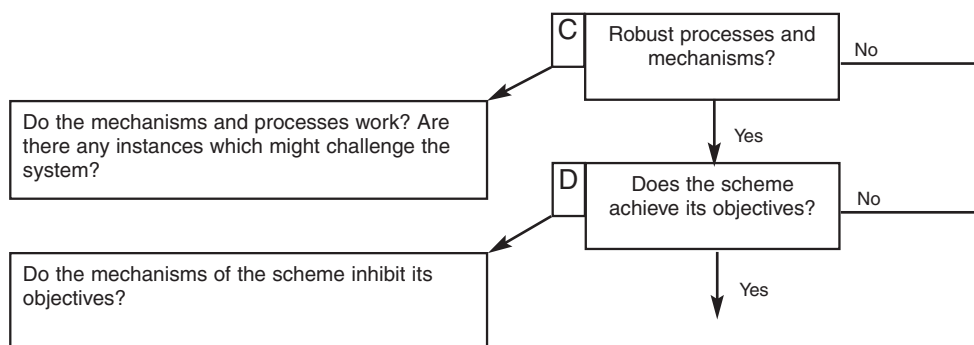
- The treatment mechanism(s);
- The reward mechanism(s);
- The levels of any reward(s);
- The eligibility of staff for reward(s);

Processes need to be in place to

- Monitor;
- Control;
- Arbitrate; and
- Implement the scheme;

These processes must be compatible with the environmental factors and must not have a negative effect on the scheme's operation.

C & D. Is the Scheme Robust and does it meet its initial objectives?



E, F & G. Subjective Decisions

Boxes E, F and G are subjective consideration which are contingent on many factors. It is impossible to provide advice on the exact evaluation criteria for these questions, but stakeholder analysis is a useful framework which may assist in the evaluation.

The six steps required for a simple stakeholder analysis are:

1. Identify the stakeholders;
2. Determine the responsibilities of each stakeholder;
3. Determine the pros and cons for each stakeholder of the scheme;
4. Consider the relative importance of each stakeholder view;
5. Consider the short- and longer-term consequences of the scheme;
6. Make a subjective judgement.

By way of example, the stakeholders to consider when creating an incentive scheme may include:

- Staff (Innovators, technical support staff, technology transfer staff, Management, Administration, Executives etc.);
- Oversight committee;
- Sponsors;
- Government;
- The general public;
- Competitors.

Once the stakeholders are identified, it is possible to tabulate the data and subsequently have a structure from which subjective judgements can be made. An extract from such a table for a fictitious scheme where innovators get 100% of any revenue generated is shown in Table 1. It seems unlikely that this scheme will be adopted in this case.

	Innovators	TT Staff	Management
Pros	<ul style="list-style-type: none"> • Lucrative • Motivating 	<ul style="list-style-type: none"> • Support from innovators • Good communications • Flow of innovation 	<ul style="list-style-type: none"> • Innovators motivated • Technology transfer increased
Cons	<ul style="list-style-type: none"> • Promotes Competition • Stifles communication • Reduces Collaboration 	<ul style="list-style-type: none"> • Imbalance in rewards • No reward for contribution 	<ul style="list-style-type: none"> • Declining resource pool for core work • Body takes no share of revenue • Net negative contribution to budget from innovators use of facilities
Responsibilities	<ul style="list-style-type: none"> • Contribute to core function of body • Contribute to financial viability of body 	<ul style="list-style-type: none"> • Facilitate technology and knowledge transfer • Achieve value for money deals for the body 	<ul style="list-style-type: none"> • Ensure core commission for body is achieved • Maintain financial integrity • Maintain morale of all staff • Pursue technology and knowledge transfer
Relative Power	3rd	2nd	1st

Table 1 Example of a simple stakeholder analysis for a fictitious rewards scheme

Implementation

Once a suitable scheme is chosen and implemented, there should be a periodic review of the efficacy and suitability of the scheme to enable incremental improvements to be made.

2.1 Measurement Schemes

What measurement method should I use?

There are several methods to measure performance for the purposes of incentivisation. These methods can be distilled to:

1. IPR Based Assessment;
2. Income Based Assessment;
3. Savings Based Assessment;
4. Consultancy Based Assessment.

These are not mutually exclusive and several public sector bodies have successful schemes which use more than one method of assessment.

2.1.1 IPR Based Assessment

“Rewards to inventors”

Rewards are given to staff based on the successful identification, protection and/or exploitation of intellectual property rights (IPR). The rewards could be linked to several stages of the IPR process:

1. Upon filing of an invention record;
2. Upon filing of a patent application;
3. Upon publication of a patent;
4. Upon grant of a patent;
5. Upon successful licensing or sale of a patent.

This mechanism could be considered for forms of IPR other than patents where appropriate (e.g. copyright, plant breeders rights etc.).

Key Issues

The authors/contributors to the IPR have to be identified as early as possible and a formal record made.

Pros

- Little judgement involved – objective measurement

Cons

- Can act as a perverse incentive to push for weak patents (if there is no link to exploitation)
- Not all work can be protected
- IP management group must ensure quality of patents
- Can be divisive within research groups (inventive contribution etc.)
- Patent system can result in a long delay between initial filing and potential reward.

2.1.2 Income Based Assessment

“Rewards to income generators”

Rewards are given to individuals who are responsible for producing revenue and profit for the body. The rewards could be linked to several stages of the process:

1. Upon registering the revenue generating concept;
2. Upon implementation of the concept;
3. Once the revenue stream commences.

Key Issues

The key issue with this measurement scheme is determining which individuals receive a reward for income generation. Does the scheme include:

- Researchers?
- Technicians?
- Technology transfer staff?
- Business development personnel? etc.

This issue is explored in more detail in Section 2.3.

The next issue is to determine how to separate an individual’s contribution to products or services which would have generated revenue anyway.

- Do you reward individuals whose contribution has increased revenue?
- Do you reward individuals who have generated revenue?
- How do you measure the contribution from staff?

Pros

- Rewards are directly related to successful commercial income generation
- Objective Measurement

Cons

- Difficult to establish contribution of staff
- Could be long delay between idea and revenue

2.1.3 Savings Based Assessment

“Rewards for suggestions/savings”

A comprehensive treatment of savings based assessment and incentive schemes is given in Reference 1.

2.1.4 Consultancy Based Assessment

“Rewards for expert staff”

Expert staff from the public sector are often called upon to assist industry in a consultancy capacity. It is possible to reward these staff for their contribution and rewards could be given to:

- All staff who work in a consultancy capacity;
- Staff who act as solo consultants without any backup from their employing body;
- Staff who act as consultants with support from their equipment/employing body;
- Staff who bring in consultancy work for their research group;
- Staff who bring in consultancy work for employing body.

It is worth noting that some of the activities outlined above constitute contract research and the definitions and boundaries for consultancy and contract research differ across individual bodies.

Key Issues

- Is any incentive for this work appropriate or is it an integral part of an individual's job description?
- Which individuals should be eligible?
- Are individuals bringing in new business rewarded?
- Are individuals satisfying existing business commitments rewarded?
- What is the value of the award which should be given?
- How many days of consultancy should staff be allowed to pursue?
- What liabilities arise?

Pros

- Allows staff to pursue consultancy for
 - Profit
 - Learning
 - Promotion of industry links
 - Profile raising

Cons

- Staff and other liabilities may be an issue
 - Is insurance required?
- Could reduce available resource

2.2 Reward Schemes

What reward method should I use?

There are several mechanisms which can be used to provide rewards for incentive schemes. These include:

- Percentage Rewards
- Fixed Rewards
- Equity Rewards
- Non-financial Rewards

2.2.1 Percentage Rewards

A percentage of the revenue generated by a particular activity is given to the staff member(s) who produce the revenue/saving/profit. This percentage can be fixed across all amounts of revenue (Figure 2a), but some bodies prefer a tapered percentage profile as the level of revenue increases (Figure 2b).

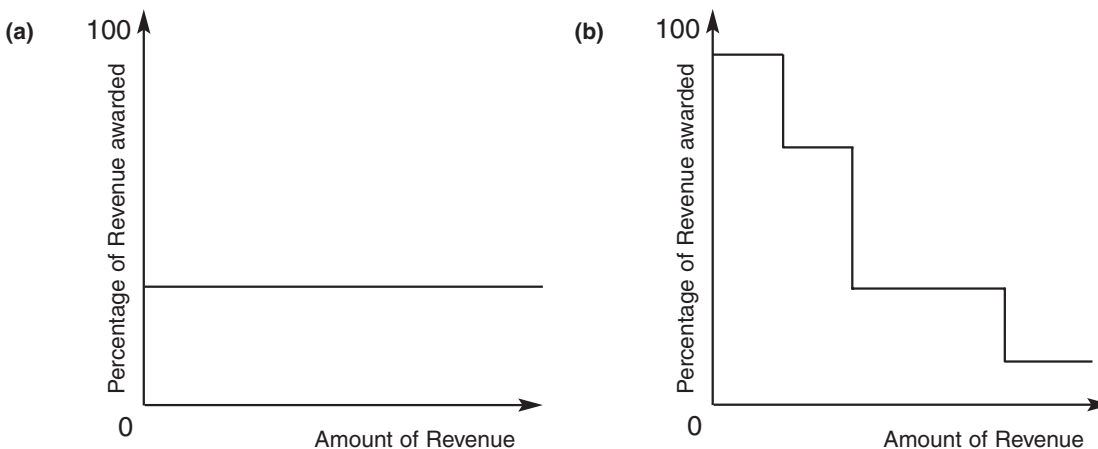


Figure 2 a) Fixed percentage scheme and b) tapered percentage scheme

It is also important to note that several schemes switch from gross to net revenue after a certain revenue level. Reference 2 has some useful information about the gross and net revenue treatment.

Key Issues

- How does this fit with performance related pay?
- How is a “fair” reward level determined?

Pros

- Direct relationship between level of success and reward

Cons

- “Generous” reward levels could be generated which may seem inappropriate

2.2.2 Fixed Sum Rewards

Under this scheme, fixed rewards of a pre-set sum are given for staff upon completion of a measured milestone for example:

- Filing a patent;
- Generating £xk of revenue;
- Producing x% of savings;
- Bringing in x consultancy commissions.

Examples of fixed sum rewards are given in Reference 1.

Key Issues

- Determination of a suitable level for rewards. (Section 3.2)

Pros

- Simple process
- Simple calculation of reward
- Transparent scheme

Cons

- Indirect link between reward and level of success

2.2.3 Equity Awards

It is now possible for most public sector bodies to offer rewards in the form of equity in a venture (a spin-out example) to staff who are involved with that venture. The Civil Service Management Code has been amended to enable civil servants to enjoy such awards.

Key Issues

- Determination of a “fair” equity share.
- Dilution of equity share on subsequent investment rounds.
- Eligibility and effects on subsequent recruitment (into the equity vehicle)

Pros

- Direct and compelling interest in the new venture
- Lock-in periods can encourage longer term participation

Cons

- Tax implications of share options

2.2.4 Non-Financial Awards

References 1 and 2 contain examples and ideas for non-financial awards for incentive schemes. These include:

- Vouchers;
- Sabbaticals;
- Laboratory facilities and equipment;
- Staff facilities;
- Pen or other corporate style gifts;
- Awards and Honours;
- Publicity in internal documents;
- Notes on personnel files;
- A “thank you”.

Key Issues

- Managers should be aware that balancing the achievement and the award would be prudent.

Pros

- Inexpensive rewards mechanism
- Can reward large groups with facilities etc.

Cons

- Awards can be viewed with scepticism

2.3 Eligibility

Who should I reward?

Some bodies discriminate between inventors, innovators and knowledge transfer or technology transfer staff. Some incentive schemes only operate and give rewards to scientists or staff generating IPR, some extend the scheme to innovators and some reward all participating individuals, irrespective of their day to day duties. There is no one solution and a mechanism which is most suitable to a particular organisation will have to be selected.

Key Issues

Eligibility is a highly subjective and contingent part of an incentive scheme, but issues can be resolved using the methodology described in Section 2.

Innovators

- It is government policy to reward those who produce innovative ideas, particularly ideas which generate revenue.
- Serial innovators can, with the right environment, play a major role in the generation of income and the profitability of the UK.

Technology transfer staff

- Are in relatively short supply.
- Can be retained through suitable basic salary structures or through suitable incentives.

Legal and support staff

- Often have to go beyond their previous experience to assist commercial activities.

SECTION 3 ENSURING STAKEHOLDER SATISFACTION

How do I ensure all stakeholders are happy with the outcome?

A significant sub-task within the creation and implementation of an incentive scheme is ensuring that all stakeholders are comfortable with the scheme. A framework that assists this process is outlined in Section 2. Before the incentive scheme is implemented, the stakeholders should be consulted and their views accommodated, where appropriate. The stakeholders can also be involved with the periodic reviews of the scheme.

3.1 Conflicts of interest

How do I manage Conflicts of Interest?

Reference 2 has excellent information regarding the assessment and management of conflicts of interest. Commercial activities in general, and incentive schemes in particular can produce increasing incidences of real or apparent conflicts of interest. The key issue is that clear procedures should be in place to identify and manage conflicts of interest, rather than allowing fear of such conflicts to prohibit appropriate rewards or activities. The National Audit Office study, “*Delivering the Commercialisation of Public Sector Science*”, reinforces this view⁵.

3.2 Magnitudes of Rewards

At what level should I reward?

As stated in reference 2, the magnitudes of rewards should recognise the balance of contributions made by individuals and by the organisation. As this is a subjective decision, the process of Section 2 should be implemented appropriately. It may also be helpful to consider similar organisations and perform a benchmarking exercise.

3.3 Equality and Balance

How do I ensure fairness?

Reference 2 and the Civil Service Management Code⁴ are useful references when considering equality and balance issues. Transparency and openness in procedures are key to contributing to the perception of equality, in addition to the provision of a forum in which matters of this nature can be freely discussed.

SECTION 4 SCENARIOS AND EXAMPLES

4.1 Research Councils

PSRE/Body	BBSR	CMRC	NERC	PPARC	EPSRC	ESRC	CCLRC
Measurement				Incentive schemes produced by universities			
IPR	×	×	×				
Income	✓	✓	✓				
Savings	×	×	×				
Consultancy	×	✓					
Reward							
Percentage	Tapered	Tapered	Tapered				
Gross-Net switch?	✓ 50k	×	×				Net
Fixed	×	×	×				
Equity		×	✓				
Non-financial		×	×				
Eligibility							
Inventors	✓	✓	✓				
Innovators	✓	✓	✓				
TT/KT staff	✓	✓	×				

4.1 Departments and Departmental PSRE's

Department	Department of Health					DEFRA		MOD	Home Office	DCMS
PSRE/Body	NIBSC	PHLS	NRPB	NHS	CAMR	CEFAS	CSL	DSTL		
Measurement										
IPR	×			×				✓		
Income	✓			✓				✓		
Savings	×			×				×		
Consultancy				×				×		
Reward										
Percentage	Tapered			Tapered		Fixed 10%		Tapered		
Gross-Net switch?	× Gross			× Net				× Net		
Fixed	×			×						
Equity				✓				✓		
Non-financial				×						
Eligibility										
Inventors				✓				✓		
Innovators				✓				✓		
TT/KT staff				×				×		

References

¹ “Guidance on schemes to reward innovative ideas”, written by the Cabinet Office is available from <http://www.cabinet-office.gov.uk/civilservice/publications/ideasguidance/innovation.pdf>

² “Good Practice for Public Sector Research Establishments on Staff Incentives and the Management of Conflicts of Interest”, written by the Office of Science and Technology is available from <http://www.dti.gov.uk/ost/aboutost/psre.htm>

³ “Managing Innovation”, J. Tidd, J. Bessant and K Pavitt, John Wiley & Sons, 1997, Chichester, England ISBN 0-471-97076-X
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⁵ www.nao.gov.uk/publications/nao_reports/01-02/0102580.pdf

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