



Project Document Cover Sheet

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Interim Reporting Template

Project Name: *PiP (Principles in Patterns) University of Strathclyde*

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Reporting period: *November 2009 – April 2010*

Section One: Summary

1.1 Technical demonstrator

The project's technical development plan sets out a staged development in 3 phases:

- a *demonstrator* based on the current class and course descriptor forms which acts as prototype demonstrating the key opportunities afforded by the project's approach to data collection and storage
- extension of the *demonstrator* into a *functional system* largely derived from the current form-based procedures but that extends to encompass some enhancements and local variations and which integrates with a repository of pedagogical support materials
- extension of the system to include a range of *value added* questions and sections addressing areas currently missing from the current forms, in particular, information about learning design, along with the appropriate reports and integration with an extended support repository

The first phase of the plan is now fully complete and the demonstrator tool was presented for the first time at the February 2010 meeting of the PiP project steering group. The tool is currently forming the basis for discussions with key stakeholders as part of an iterative process of development set out in stage two. The demonstrator is an important tool in engaging stakeholders because it allows them to visualise the potential of an online system to improve the efficiency and effectiveness of the approval process.

1.2 Developments in thinking about quality assurance and enhancement

The project will create an interactive web-based approval system to support decision-making and workflow management with dynamic guidance for users. The aspiration is not merely to replace the existing workflow with a more convenient online system that replicates current practice. Rather, the aspiration is to develop an online system that has high-impact: it should help enhance the learning designs underpinning curricula and it should enable a richer analysis of the institutional data that is stored about modules (classes) and programmes (courses).

An important insight guiding current thinking concerns the relationship between the approval and review processes. Currently, programmes and modules are approved before any delivery has occurred with the result that significant changes from the approval plan are likely during first delivery. The project is exploring a potential new approach to approval and review in which newly-approved courses and classes might be revisited after their first implementation, with data from a planned review fed back and used to update the programme/module descriptions. In this way, delivery and review become an ongoing iterative process in which information from review is fed back to enhance module/programme documentation and to provide a history of delivery and subsequent enhancements. Implementing this would represent a substantial change to the way in which these processes are currently managed. This might be relevant to all HE institutions that see approval and

Institutional Approaches to Curriculum Design Programme

review as part of a wider enhancement agenda. The project is exploring the need for additional resources to support this more wide-ranging proposal to reform of approval-review processes.

1.3 Securing senior management support

PiP was originally conceived as a demonstrator project that would, over time, form the basis of a new approval system that might be adopted by the relevant communities at the University of Strathclyde. In reality PiP has been more successful than anticipated. Senior officers in the university have already identified the potential of the PiP project to help address some urgent strategic issues. The university is currently developing a new educational strategy and has developed a list of graduate attributes and is engaged in a programme of curriculum renewal. The PiP project has been recognised as a way to embed the ideas embodied in that educational strategy into curriculum design processes and to monitor curricular provision. Activities that have contributed to securing senior management support during this reporting period include:

- Creation of materials including the technical demonstrator to support the recent QAA Scotland ELIR review of the University of Strathclyde
- Presentations to senior managers including the vice-principals and heads of directorates

The PiP project has also benefitted from the Enhancement Led Institutional Review [ELIR] process. ELIR is organised by the QAA and involves institutional visits, interviews with staff and students and scrutiny of documentation. The purpose of the ELIR visits is to evaluate the quality of the University's educational provision and the adequacy of the procedures in place for quality monitoring and enhancement processes. The ELIR team were positive about the solutions PiP was offering to some quality issues within the University of Strathclyde. This external perspective has created a strong mandate for changes to the approval process and has made it even easier to get buy-in from key university constituencies for the PiP developments.

Section Two: Activities and Progress

2.1 Activities and progress

During this reporting period the project has focussed on three major activities: (i) the development of a technical demonstrator; (ii) securing senior management support; (iii) the development of new frameworks and questions (i.e. new data fields) that would enhance the design and approval processes and link them to the aspirations embedded in the university's educational strategy.

The development of new processes and supporting materials through the PiP project is conceived as an iterative process of communication with stakeholders to establish the content and validity of technical outputs of the project and to ensure that outputs properly reflect the aspirations in the university's evolving educational strategy. Stakeholder consultations are being conducted within the context of the strategic activities directed by the university's Educational Strategy Committee (ESC). The PiP team have created briefing papers and other documents for ESC, for the Graduates for the 21st Century Working Group and for the Curriculum Renewal Working Group and have presented the project aims to the members of these Committees. This process of consultation and information sharing will continue as the project progresses. Because of the strategic nature of project outcomes which will intersect with, and impact on, numerous related university processes the project team is working closely with the University's Governance, Management and Planning Team (GMAP) to manage a process of engagement with key stakeholders.

The PiP team have also individually briefed members of the university's senior management team on the aims and operational implications of the project. These briefings are particularly important in a period of substantial change at the University of Strathclyde which has seen the creation of a new management structure and a number of important new appointments.

2.2 Technical development

The technical development has focused on addressing the challenges raised in building a system to support curriculum approval. A number of different solutions have been explored and evaluated and different approaches have been investigated to the integration of the approval system with the University's SharePoint platform. This integration is necessary in order to better leverage the features available.

Interoperability is also a focus of investigation. Building engagement with the owners of other corporate IT systems is part of the wider process described above, however we have had a number of useful meetings with those who manage other systems and general agreement has been reached about the way ahead. As Strathclyde uses many home-grown corporate systems (student records, finance, human resources, etc.) these integrations are likely to be specific to local requirements. However, the planned web-services approach would be adaptable to other institutional contexts.

The third area of technical development has been data modelling. This has been approached in the context of the Metadata for Learning Objects and XCRI standards. However there are many areas related to workflow and internal information management that are not addressed by these standards which are primarily meant for exchanging data on learning opportunities that have already been approved. The first step has been mapping all the data elements currently captured in the different faculty and departmental programme and module approval forms and in the various university policies and guidance notes to produce a composite set of data elements referenced where possible to MLO/XCRI elements. As engagement develops with those who manage different systems, the mapping will extend to the data elements captured in the relevant corporate systems.

2.3 Progress against work-packages

WORKPACKAGE 4: Agile development of revised process workflow tools and supporting materials

Objective: develop, pilot and refine materials to support curriculum design

Model enhanced/ revised workflow and identify opportunities for materials and process development

A demonstrator version of the process workflow tools, drawing on the lessons from the project's baseline report, was presented to the PiP Steering Group in February 2010 and is being used as the basis for briefings to senior managers. The demonstrator also forms the basis of consultation activities with key stakeholders to further develop revised workflow and processes.

Requirements gathering and analysis

Initial requirements report completed and presented to the PiP Steering Group in February 2010. Working group comprising key stakeholders including representatives from professional services and from the faculties has been convened and initial requirements gathering workshop held in April 2010.

Identify initial partners – administrative and academic

The project team is using two working groups to refine its technical and pedagogical products: firstly the project team is working with the technical working group of the university's educational strategy committee to refine the work flow tools. A separate academic working group has been convened.

Create first iteration of workflow tools and supporting materials
Iterative piloting and refining of workflow tools

Demonstrator version of workflow tools completed.
Workshops with key stakeholders are under way to refine workflow tools.

WORKPACKAGE 5: Agile development of curriculum designs and support materials

Objective: develop, pilot and refine materials to support curriculum design

Model enhanced curriculum design practice and identify opportunities for materials development

Work is on-going to develop revised processes and supporting materials that best reflect institutional strategy. Outputs include briefing papers for the university's Educational Strategy Committee.

Institutional Approaches to Curriculum Design Programme

Identify academic partners	A working group comprising administrative and academic stakeholders with representatives from the faculties has been convened and consultation workshops are under way. Further academic partners will be consulted as the project progresses.
Requirements gathering and analysis	See consultation exercises detailed above.
Create first iteration of curriculum designs and supporting materials	A growing website (www.strath.ac.uk/learnteach) includes supporting materials to help academic staff design more effective courses and classes. At this stage in the project the team are developing recommendations to inform the development of the university's education strategy, particularly in the area of graduate attributes. The strategy will in turn inform the development of new data fields and supporting materials that are aligned with the university's educational strategy.
Iterative piloting with academic partners	The university is currently reviewing its course and class approval processes and is committed to using the activities and outputs of the PiP project to inform this review and the subsequent changes made. Because of this integration into broader university activities piloting with academic partners has been slightly delayed.
WORKPACKAGE 6: Year 2 project management and governance	
<u>Objective:</u> the effective management of the project	
Reporting to JISC	First interim report delivered to JISC in October 2009 Second interim report delivered to JISC in April 2010
Meetings of local management group	The project's local management group comprises the internal members of the project steering group and meets twice a year (as well as meeting as part of the larger steering group). The next meeting is scheduled for May 2010.
Team meetings	The project team has a scheduled monthly meeting as well as ad hoc meetings as required.
Meetings of project steering group	The full project steering group met in February 2010 and will meet subsequently once every six months.
Liaison with university constituencies	The project was featured in the March 2010 edition of PRISM, the University of Strathclyde's internal staff publication.

Institutional Approaches to Curriculum Design Programme

Maintenance of document archive and shared area

On-going.

WORKPACKAGE 7: Year 2 programme activities

Objective: to share information with and benefit from partner relationships across the programme

Cluster meetings

Second cluster meeting (OU) held in November 2009 in Milton Keynes.

Third cluster meeting (Ulster) held in April 2010 in Belfast.

Programme meetings

No programme meetings took place during this reporting period but the project team have participated in Elluminate sessions run by the programme team and has been invited to present early PiP project outcomes at the programme meeting in May 2010.

Programme evaluation activities

A revised project evaluation strategy is in production, drawing on the BILLS methodology. The BILLS project is funded by the JISC (http://www.strath.ac.uk/learningservices/innovation/innov_projects/bills/)

Joint dissemination activities

A joint paper with the cluster has been planned but progress has been delayed due to local commitments at all of the cluster partner sites. Plans for further joint dissemination activities will be discussed at the April 2010 cluster meeting.

WORKPACKAGE 8: Year 2 dissemination

Objective: Sharing interim findings and lessons learned within institution and across the sector

Project website development

Development of the project website is on-going, including regular blog updates on project activities (www.principlesinpatterns.ac.uk).

Conferences/presentations

The PiP team presented a demonstration (*Curriculum Approval with Flexibility and Consistency*) at the JISC Conference in April 2010

2.4 Partnership building

External activities

In January 2010 the PiP Project Manager visited the Edinburgh College of Art who are currently developing an online system to support task, module and programme-level approval and student assessment. Although ECA is a much smaller and more homogenous institution than Strathclyde, a lot was learned from their approach to systems development and from the information included in their approval process. The team from ECA have been invited to make a further presentation to the PiP team at Strathclyde.

Section Three: Risks, Issues and Opportunities

In our previous interim report (October 2010) we reported on the significant re-structuring activities underway at the University of Strathclyde. Changes which directly affect the project and the project team include:

- **Re-structuring of professional services:** both departments involved in the project (Learning Services and CAPLE) have been involved in a major re-organisation of the university's central services. CAPLE has retained its name and become part of the SEES (Student Experience and Enhancement Services) Directorate. Learning Services is now part of the Information Systems Directorate. Anne Hughes, the university's Deputy Principal for Learning and Teaching, who chairs the project steering group and Shona Cameron, Director of Learning Services, who is currently the project champion, are both leaving the university in 2010. The project team will seek to replace their expertise on the Steering Committee once decisions have been made about senior responsibilities at the institution. Any additional implications for individuals associated with the project will be communicated to JISC as soon as possible. The project is recognised as an important component in the successful delivery of the university's strategic plan and has the support and commitment of senior staff in the new directorate structure.
- **Changes to the scope and scale of the project**
The increased visibility of the PiP project at the University of Strathclyde and the commitment the project has received from senior managers and other key stakeholders is recognised as highly beneficial, but has also created demand for additional activities that are currently outside the original project plan. Similarly, innovative approaches to approval and enhancement currently being explored by the project team may require more extensive change management activities, particularly at faculty level. The project team are exploring the possibility of securing additional resource commitment from the university to support additional activities. The project team recognises that demand for additional functionality and partnerships with multiple services and faculties are potentially challenging to manage and are working with key stakeholders to resolve any conflicting priorities.
- **Re-organisation of academic faculties:** The merger of two existing faculties (Education and Law, Arts and Social Sciences) is currently under way. This merger has created challenges for the project because it has triggered re-organisation of roles and responsibilities both within the faculty and within the university's professional service directorates. For example, the role of faculty officer is recognised as key to managing changes to the course and class approval process within faculties, but all faculty officers are required to re-apply for their posts as part of the re-organisation. Although these changes are not perceived as serious risks to the project, we are monitoring changes and taking advice from the GMAP team and from Education Strategy Committee about the best way to manage consultations with faculties during the change period.

Section Four: Outputs and Deliverables

4.1 Project outputs

In our last interim report we noted that support materials for staff might take a number of forms, including, but not restricted to design patterns. The revised outputs from the project are therefore:

- A baseline map of the sequence of institutional processes and procedures that support decision-making and approval of curricula.
- A reworked map including a set of tools and associated guidance materials to support the streamlining and enhancement of institutional processes and procedures associated with curriculum design
- A set of tools and associated guidance materials that address known teaching and learning issues of high relevance to academic staff in the disciplines and help academic staff to create effective designs
- A website detailing progress during the lifespan of the project and as a dissemination point after the project close.
- An evaluation report detailing successes and lessons learned.
- Interim and final reports to JISC detailing lessons learned.
- Conference and other papers, presentations and other dissemination activities

4.3 Technical outputs

System Architecture

The system is being modelled as a service oriented architecture with 3 principal components:

- course and class approval workflow system
- support material repository
- end user interfaces

Course and Class Approval Workflow System

The workflow system will hold:

- course/class proposals and all the metadata associated with these proposals (e.g. workflow status, versions, comments, etc.)
- structural information related to course/class proposals
- process rules (e.g. when data elements are required or hidden, approval rules, permissible values for fields, etc.)
- references that allow the data element to be linked to resources in the support materials repository.

The data store is envisaged as a standalone database application. Data from the data store is exposed to and collected from the end user interfaces through web services. The system will also integrate with other corporate systems through web services. The result is a system that can be repurposed for other applications and in other institutional contexts.

Support Materials Repository

The support materials repository catalogues a variety of support materials including short definitions, compliance guidance, case studies. Materials in the catalogue will be mapped to the relevant forms and pages of the workflow system providing *just in time* support.

End User Interfaces

The end user interfaces will provide access to the course proposal data store and the support materials repository. User interfaces of the course and class approval workflow system will be delivered through Microsoft SharePoint which allows us to leverage the SharePoint features such as user management, security trimming. The support materials that accompany these forms and reports will also be delivered through SharePoint. The support materials repository may also be made available through other web interfaces, including the project web site.

Other Technical Outputs

The underlying data model for the course and class approval workflow system will be based on the MLO/XCRI standards. The resulting model will provide an extension to the existing standard, which is focused on publicising existing learning opportunities, that adds additional data elements related to, for example, quality assurance or business process.

The project also continues to use BPMN as a process modelling language for capturing and communicating workflows.

Section Five: Evaluation

5.1 Evaluation activities

The project's evaluation strategy is continuing to evolve. Core components of the strategy include:

- Consultation activities with key stakeholders as part of the agile development of systems and supporting materials provide formative evaluation data to the project and a series of snapshot evaluation points which can be used to evaluate the project
- Value workshops based on the BIILS methodology which encourage key stakeholders to explore and value the potential outcomes and outputs of the project from different viewpoints. These workshops will be repeated at the end of the project to reflect on what the project has achieved and what changes, if any have been made and why.

These two strands of activities will inform the summative evaluation at the end of the project.

5.2 Evaluation methodology

PiP has been accepted as one of the institutional case studies for the BIILS (Benefits of Investment in ICT) Project (http://www.strath.ac.uk/learningservices/innovation/innov_projects/biils/).

The BIILS Evaluation Toolkit

(http://www.strath.ac.uk/media/departments/administrativedepartments/learningservices/innovationseriesandprojects/biilsproject/BIILS_Project_Evaluation_Toolkit_-_Revised_-_Version_2.2.pdf) will inform evaluation activities during the PiP project. We have selected the BIILS toolkit because it allows us to explore the value of the project to different stakeholders.

5.3 Evaluation timetable (May – September 2010)

May 2010	Requirements gathering and agile development workshop with key administrative stakeholders including representatives from Registry, Estates etc.
May 2010	Workshop with senior management team including the deputy principals and senior administrators
June 2010	Presentation and value workshop with faculty representatives
May-September 2010	On-going agile development process with key stakeholders
September 2010	Iterative development activities with faculties (including planning for pilot testing)

5.4 Evaluation challenges

Embedding the project into the wider process of reform of institutional procedures, and the on-going context of radical institutional change in which the project is currently operating, will make it difficult to disaggregate the impact of PiP from other changes at the university. We explored these issues at the April 2010 cluster meeting and we are developing questions to help participants in our evaluation process identify PiP outcomes.

Section Six: Outcomes and Lessons Learned

6.1 Emerging thinking about module/programme quality assurance

The project aims and objectives of the project plan have been clarified and refined in order to facilitate the communication of project activities to internal and external stakeholders. The revised aims, which will be presented to the Project Steering Group on May 2010, are: (i) to improve the efficiency of course and class approval and review processes (ii) to enhance the quality of the educational designs that result from these processes and (iii) to ensure that course and class provision is aligned with institutional policies and strategies.

In recent months the project team have been exploring a number of strategic issues that already influence curriculum design at the University of Strathclyde, or that are likely to become important factors in the development of the university's new educational strategy. These issues include the impact of the graduate attributes agenda and related opportunities to strengthen the relationship between assurance and enhancement activities which should be reflected in the class and course approval and review processes.

The PiP project potentially provides a timely opportunity to use the class and course approval and review processes to stimulate thinking about the development of graduate attributes in the curriculum. Recommendations being explored for the embedding of graduate attributes in and through a technologically-supported approval process include:

- Making recommendations through drop down lists in the approval work-flow system about possible learning outcomes, those that if pursued would lead to significant attribute development (e.g. those related to self-evaluation of one's own work or peer evaluation of the work of others)
- Creating drop down lists of high-impact learning activities that are likely to trigger attribute development (e.g. work-related learning tasks, learning community activities, research projects, students devising their own module).
- Suggesting assessment and feedback activities which might trigger active student engagement and the development of the learners' ability to monitor, manage and regulate their own learning. Self-regulation is seen as the common element underpinning all attributes

Each of these recommendations or suggestions would be supported by web-resources that include a rationale and examples.

In order to support the monitoring of, and reporting about, opportunities for attribute development and other curriculum design innovation, the project is also exploring the potential to redesign class/course approval and review processes so that they encourage reflection on core processes underpinning graduate attribute development (i.e. the need for self/peer evaluation) and on the nature of learning tasks. One possibility is a re-distribution of the documentation created at different stages in the approval and review cycle, although these approaches will have resource implications. The University Strathclyde will need to decide on its priorities in this area and allocate additional resources to support any changes that transcend current PiP activities.

6.2 Embedding of project activities into wider university change processes

At the start of the project it was anticipated that project activities, outputs and outcomes would be of considerable interest to a variety of university constituencies. The main project outputs were conceived as a proof of concept model which may form the basis of new systems that could be further developed and eventually adopted by the university community. The university has already seen the

Institutional Approaches to Curriculum Design Programme

potential of the PiP project to address some urgent issues related to course and class approval and the creation and re-use of documentation about courses and classes. The university is also developing a new educational strategy and the PiP project is recognised as one way to embed the ideas embodied in that strategy into curriculum design at the institution. Whilst these developments are positive, embedding of the project into wider university activities does create new challenges, particularly in timetabling of project activities.

Section Seven: Communication and Dissemination Activities

7.1 Internal Communications

This reporting period has been very much concerned with ensuring that project stakeholders, particularly internal stakeholders, are informed about project aims and activities. The project team are in the process of agreeing a communications strategy that will inform activities for the next 12 months as more internal stakeholders are brought into the project. Key internal communication activities this reporting period have included:

- Development of a demonstrator version of the process tools which the team have used with a variety of stakeholder groups to explain project goals and outcomes and to stimulate discussion about system and process requirements.
- Individual presentations to members of the senior management team at the University of Strathclyde.
- Presentations to the university's Education Strategy Committee.
- Presentation to the university's VLE team.
- The project was featured in the March 2010 edition of PRISM, the University of Strathclyde's internal staff newsletter (http://www.strath.ac.uk/media/publications/prism/2010/Prism_249_for_web.pdf).

The demonstrator has been a particularly important tool in our communications activities because it allows stakeholders to visualise the planned outputs of the project and to map their own practice and ideas for enhancement of processes. Further workshops with key groups which use the demonstrator as the basis of discussions are planned from May 2010. These workshops will form the basis of the project's user requirements analysis, system development and evaluation activities.

7.2 External Communications

Members of the PiP team presented a demonstration under the title *Curriculum Approval with Flexibility and Consistency* at the JISC Conference in April 2010.

The project team regularly update the project website (www.principlesinpatterns.ac.uk), adding blog entries and key documents and other resources. We hope to shortly make some emerging resources available via the JISC Design Studio.

In addition, the PiP team have been working with the JISC to create a video in support of the new version of the JISC publication *Effective Practice with e-Assessment* (<http://www.jisc.ac.uk/media/documents/themes/elearning/effpraceassess.pdf>).

The video will tell the story of the institutional developments at Strathclyde as a result of the success of the REAP (www.reap.ac.uk) project. One of those institutional developments is the PiP project and the video will give the PiP team the opportunity to talk about the relationship between the two projects and how the lessons learned through REAP have informed the design and development of new activities to enhance the curriculum at Strathclyde.

Section Eight: Collaboration and Support

8.1 Cluster meetings

During this reporting period the project team have attended two cluster meetings, one at the Open University in November 2009 and one at the University of Ulster in Belfast in April 2010. These meetings are valuable opportunities to gain peer perspectives on project development, share experiences and ideas and consider joint outputs and lessons for the sector. There is a general recognition that all the project teams are extremely busy and this inevitably places constraints on collaboration and joint activities, but we anticipate that there may be more opportunity for joint outputs once this phase of institutional consolidation is complete.

8.2 Critical friend

The project team hosted a visit from Peter Bullen, the critical friend to cluster C in February 2010. Peter attended the project Steering Group meeting and spent a half day with the project team. The discussion with Peter was primarily focussed on project evaluation, building on the discussions at the November 2009 cluster meeting.

8.3 Programme support

Project team members have also participated in Elluminate sessions hosted by the programme team and found these an effective way of getting useful information and sharing ideas across the programme. We hope to be able to offer a similar session from the PiP project in 2010/11.

We would value support from the programme team in developing and mounting resources on the JISC Design Studio. We are starting to develop some materials that could now be shared (and these are increasingly available from the project website).