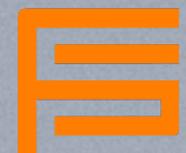




LEARNING IN THE 21ST CENTURY

EPORTFOLIOS & OPEN BADGES MATURITY MATRIX

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ePortfolios & Open Badges Maturity Matrix

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Introduction

A growing number of individuals and organisations are exploiting or planning to explore the benefits of ePortfolios and, more recently, Open Badges. Where to start? Are we ready for it? What should we do to maximise their benefits? How Could they contribute to improving and transforming our teaching and learning?

It is to provide possible answers those questions, and more, that the ePortfolio and Open Badge Maturity Framework has been designed; to help individuals, organisations, communities and public authorities to reflect on and improve on the use of technologies for learning, with a special focus on ePortfolios and Open Badges.

The maturity matrix is inspired by the work done at [Becta](#) on e-maturity, the Self Review Framework and ICT Mark (2006) now transferred to NAACE (revised in 2014), a previous ePortfolio maturity matrix developed by [EIFEL](#) (2007) and the [Australian ePortfolio Project](#), the [Australian ePortfolio Initiative](#), Australian ePortfolio Toolkit (2008) and the work from, [JISC SURF](#). The full set of publications will be published in the final version of the Matrix.

The maturity framework underpinning the ePortfolios & Open Badges Maturity Matrix (PBMM) aims at being inclusive, i.e. recognising what people and organisations are doing today, while providing a framework for future improvement, so that learning practitioners will be able to state: “this is where we are today, that is where we want to be next year.” The main function of the framework is to provide a tool to facilitate the dialogue with practitioners, leaders in education and decision makers. If you are an innovator and feel lonely in your institution, you can use the framework to engage in a dialogue with your colleagues, learning community and community of practice. If you are an education manager, you can use the Matrix to review and/or plan the changes required to support better learning and more effective ePortfolio and Open Badge practice.

The framework should not be used as a normative tool. It is very likely that some of the rubrics will not fit certain organisations and that they would like to rewrite or ignore some of them, or even create their own. It is the intention of the authors of this framework to keep it alive, and this will only happen if the framework is used, reviewed, criticised and improved.

How to use the Maturity Framework

The ePortfolio & Open Badges Maturity Framework has been designed for organisations not individuals (we are working on a competency framework to address individuals). Presented under the format of a series of matrices, it can be used to position an organisation by selecting the different elements of the matrices.

The framework could be used by Marie, a science teacher, who wonders whether she could start using ePortfolios in her teaching, despite the lack of interest of her colleagues. She could use the 8 matrices to find supportive arguments to engage in conversation with her colleagues and management to extend her initiative beyond her class and/or discipline. It could be used by educational leaders willing to position their organisation and plan future developments, or by educational managers who have understood the pervasive nature of ePortfolios and Open Badges and are willing to establish a consortium beyond institutional boundaries.

The 8 initial matrices that compose the framework are:

1. [Learning](#)
2. [Assessment](#)
3. [People -Teaching Staff](#)
4. [People - Learners](#)
5. [Technologies](#)

6. [ePortfolios](#)
7. [ePortfolios — Technologies](#)
8. [Open Badges](#)

Each matrix is organised with five maturity levels: Aware, Exploring, Developing, Integrated and Transformative (c.f. below for more details).

You might be surprised that, out of 8 matrices, only 3 use the words ePortfolios and Open Badges. Aren't the 5 other matrices relevant to them as well? Yes, they are, but we will treat them as *underpinning* matrices: the objective of using ePortfolios and Open Badges is to support and recognise *learning*, and learning happens without either of them. Yet it is the kind of *learning* that is important when designing an eco-system welcoming to ePortfolios and Open Badges.

For example, *self-directed learning* is a practice that can take advantage of ePortfolios and/or Open Badges. Yet, an organisation could be very mature regarding *self-directed learning*, while having not used either of them; and this high maturity would be a great asset to take into account when starting the use of ePortfolios and/or Open Badges. Another item is innovation: it is possible to innovate without the need of ePortfolios or Open Badges, yet, the ability of an organisation to be open to innovation is a useful indicator when starting a pilot project.

Understanding the Framework

ePortfolios and Open Badges can be produced & used in the context of learning, social interaction and work, to plan or recognise learning, hire workforce or plan its development, create teams or businesses, find or generate services. They can be produced & used in a formal or non-formal context, to recognise, celebrate or find talents, competencies or achievements.

To take into account the complex nature of learning, the ePortfolios and Open Badges Maturity Matrix (PBM) is articulate in relation to:

- **One goal:** making learning visible and recognised;
- **Two contexts:** formal and non-formal¹;
- **Three spaces:** educational, working and social;
- **Four components:** learning, technologies and their combination in ePortfolios and Open Badges; and
- **Five maturity levels:** Aware, Exploring, Developing, Integrated, Transformative.

Two contexts

Learning happens in formal and informal settings, it can be intentional or the result of other activities that are not directly related to learning. The OECD provides a definition of *formal*, *non-formal* and *informal learning* (c.f. box on the left). Based on these definitions, one can say that within formal settings, such as a school, informal and non-formal learning happens: what pupils learn through interaction with their peers, teachers and environment goes far beyond the strict curriculum.

One of the issues ePortfolio and Open Badges is trying to address is the creation of a continuous learning space where formal, non-formal and informal learning opportunities are identified and their outcomes recognised. It is why the Maturity Matrix framework will treat on a par formal, non-formal and informal learning, looking at what happens within formal and informal settings.

¹ in the context of this publication, *non-formal* includes both *non-formal* and *informal*, i.e. the learning opportunities outside the control of the formal education system (so it includes playing games at school during breaks).

Three spaces

A school is a learning place for the pupils, a working space for the teachers and a social space for all. Schools, that are defined as formal learning spaces, are also social spaces where informal learning happens. In the diagram, DIY (Do it Yourself) is placed where informal learning and working meet within the social space.

Understanding and taking into account the complexity of learning and how learning is performed, recognised and exploited is important if we want to deliver good learning experiences and create the conditions for continuous improvement and the transformation of learning practices, processes and technologies.

At the same time, we need to find a way to represent that complexity in such a way that it is meaningful and accessible to all whilst not being trivial.

Four Components

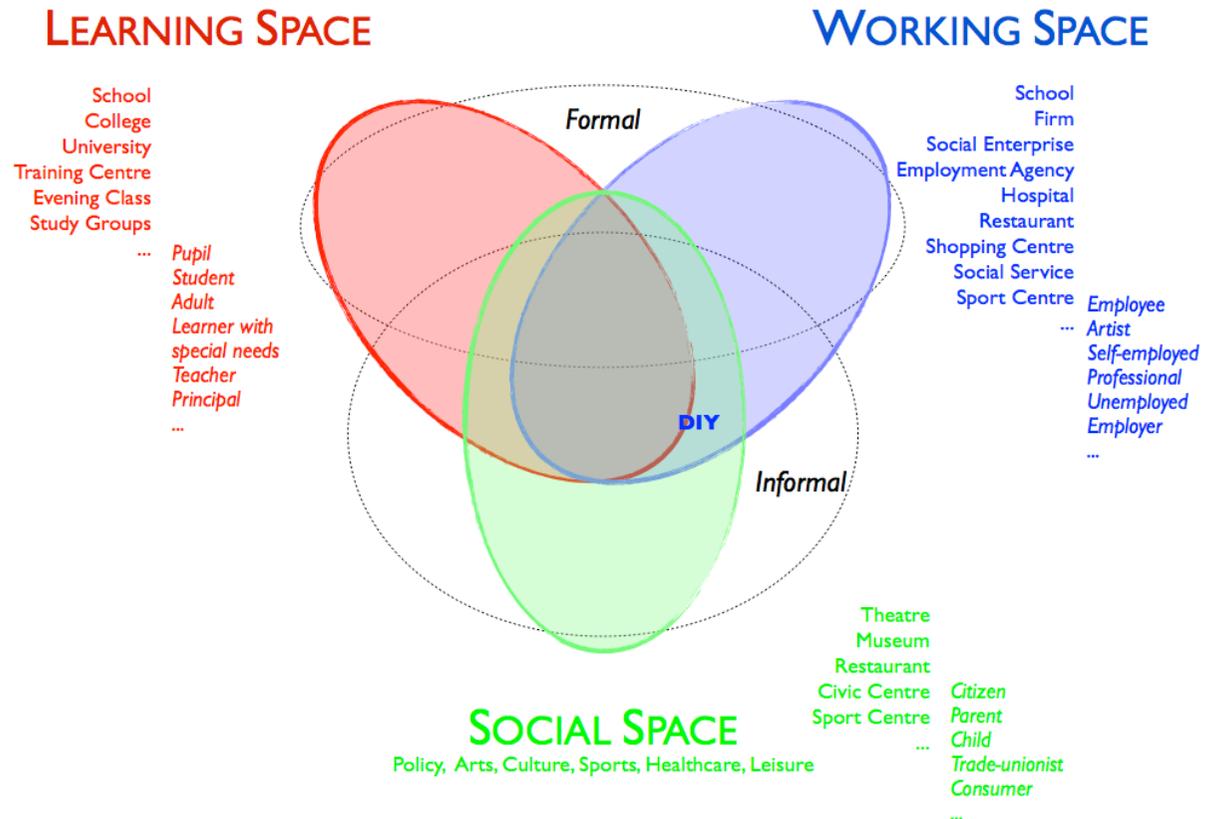
The four components of the framework are:

1. **Learning & Assessment:** what is the level of maturity of learning & assessment practices and processes, e.g. outcome based learning?
2. **People:** what is the level of maturity of teaching staff and learners, e.g. regarding techno-literacy and digital literacy?
3. **Technology:** what is the level of maturity in the exploitation of technologies e.g. with digital and social media?
4. **ePortfolios & Open Badges:** what is the level of maturity in the exploitation of ePortfolios & Open Badges e.g. partnerships and innovation?

Five Stages

The Maturity Framework describes 5 maturity stages:

5. **Aware:** something is starting to happen, such as individual or pilot initiatives.
6. **Exploring:** the process/technology is being explored at the individual faculty or departmental level.
7. **Developing:** the process/technology is in the process of consolidation, such as the extension at institutional level.



8. **Integrated:** the process/technology is now consolidated and integrated across the institution.
9. **Transformative:** the impact of process/technology goes beyond established levels; the institution is recognised as a leader and is actively contributing to its own reinvention.

The maturity stages are described through key performance indicators (KPIs). The different stages have been established in order for organisations to plan their journey: where are they now and where would they like to be in the future. The different levels should not be read as 'judgemental', but as the stages of a maturation process — a five year old is not less valuable than a ten year old or an adult!

Possible implementation levels:

1. Individual faculty/mentor/teacher/trainer
2. Department/program/discipline/team
3. Institution-wide
4. Cross-institution

The ePortfolio and Open Badge Maturity Matrix

Learning

	Aware	Exploring	Developing	Integrated	Transformative
Curriculum design	There is a growing understanding that a centrally designed curriculum does not match the needs of the learners.	Some members of the teaching staff do not simply apply the curriculum, but also redesign some elements within their own discipline.	The organisation encourages all teachers to interpret the curriculum in relation to the local context.	Learners, staff members, educational leaders are actively involved in the design and review of the curriculum.	The local and/or regional community is actively involved, along with learners, staff and educational leaders in the design and review of the curriculum.
Outcome-based learning	There is growing understanding of the need to promote outcome- and competency-based learning.	Outcome-based learning is used in a limited number of courses, or used by a limited number of teachers.	Outcome-based learning is encouraged and valued by the organisation.	Outcome-based learning is applied systematically across all disciplines.	Staff members are actively involved with their community of practice in the definition and review of the learning outcomes within and across disciplines.
Reflective learning and practice	There is a growing understanding that reflective learning and practice should be the foundation of learning.	Reflective learning and practice is integrated in a limited number of courses, or used by a limited number of teachers.	Some organisational processes have been redesigned to require reflective practice: reflective practice is promoted by senior staff with influence.	Reflective learning and practice is an integral part of the organisation's processes for all staff.	Reflective practice is integrated within a global community of practice (e.g. professional body) and contributes to global innovation and change.
Community and peer learning	There is a growing understanding of the benefits of community and peer learning.	Community and peer learning happens within a limited number of contexts.	Community and peer learning happens across disciplines and heterogeneous groups.	All the skills, competencies and knowledge of learners and staff is discoverable by other members of the community/organisation to encourage peer learning.	Peer learning happens beyond institutional boundaries within cross-institutional networks of knowledge exchange.

Self-directed learning	There is a growing understanding of the benefits of self-directed learning.	Programmed learning remains the dominant model, while there is a certain understanding of the value of autonomous learning, allowing learners to make autonomous choices regarding their learning goals and learning paths.	Self-directed/autonomous learning is encouraged and supported in some sectors/domains.	Self-directed/autonomous learning is the organisational norm and is one of the main drivers for individual and organisational development.	The organisation is actively involved in action research regarding self-directed learning in order to improve the policies, methods and tools supporting autonomous learning.
Integrative learning	There is a growing understanding of the benefits of integrative learning.	Interdisciplinary research and learning programmes are running, developed and promoted by enthusiastic individuals.	Organisational structures and processes have been developed to accommodate and encourage interdisciplinary working.	Interdisciplinary learning is the organising principle integrating all disciplinary studies. It is reflected in the organisation structures.	Integrative learning goes beyond disciplines and institutional walls to integrate outside resources, formal, informal and non-formal.
Innovation	Innovation happens outside of the organisation.	Innovation in learning & teaching exists but remains confined to individual teachers.	Teachers and learners are encouraged to innovate in learning & teaching. Several innovations have scaled-up and have had real impact.	Teachers and learners are equally recognised and valued as innovators, including through disruptive innovation.	Innovation is the engine that makes drives the organisation. It is constantly re-inventing itself.

Assessment

	Aware	Exploring	Developing	Integrated	Transformative
Assessment transparency	The need for full transparency of the assessment process and criteria has been identified as an issue.	All assessment processes and criteria are transparent. The criteria and processes are generally externally defined.	A number of processes and criteria are defined internally and some are negotiated with the learners.	There is a policy requiring the publication of all the assessment processes and criteria, including the promotion of negotiated ones.	Learners are actively involved in the definition of the policies regarding assessment process and criteria.
Accreditation of prior experience and learning (APEL)	Some staff are aware of the potential benefits of APEL.	APEL is practiced but only by a small number of staff and/or disciplines.	There is an APEL policy regarding admissions, continuing professional development and internal promotion.	The APEL policy is systematically reviewed and improved. It is supported by senior management and educational leaders.	The lessons learned through the practice of APEL are shared with the larger community, beyond the institutional boundaries.
Recording and reporting progress and achievement	Recording progress and achievement is essentially a formal process that is done by teachers for accountability. Learners are essentially kept out of this process.	There are some areas where learners are actively involved with their teachers in the recording and reporting of their individual and collective achievements.	Learners are actively involved with their teachers in the recording and reporting of their individual and collective achievements.	Systematic participation and contribution of learners and staff in the collection of evidence, review and reflection processes is changing the organisational culture and the learning environment.	Individual and organisational progress and achievements are aggregated beyond the institution's boundaries to contribute to the improvement and/or transformation of policies.

<p>Seeking and Providing Feedback</p>	<p>Feedback is essentially a formal process that is done by teachers <i>to</i> learners. It is clear, constructive and timely, using a variety of sources to prompt reflection and further action.</p>	<p>Feed-back on learners' performance is used to <i>feed-forward</i>, i.e. adapt learning activities and plan further action. Learners are occasionally invited to seek and provide feedback.</p>	<p>While teachers provide informed feedback to learners and peers, learners are encouraged to actively seek and provide feedback in both formal and informal curriculum areas.</p>	<p>Teaching staff collaborate on a regular basis to provide holistic feedback, beyond disciplines, to prompt holistic reflections and further action at individual and collective levels. Learners are regular seekers and providers of feedback involving a range of audiences, in both formal and informal curriculum areas.</p>	<p>The competencies involved in the provision of feedback is recognised and celebrated by the institution.</p>
<p>Authentic assessment</p>	<p>Assessment is essentially a formal process that is done by teachers <i>to</i> learners through tests, examinations under controlled conditions.</p>	<p>Some individual initiatives have developed forms of assessment rooted in performance in real-life settings — beyond examination under controlled conditions.</p>	<p>Organisational structures and processes have been developed to accommodate and encourage assessment of performance in real-life settings.</p>	<p>The organisation prioritises assessment evidence from real life performance, exceptionally using controlled assessments.</p>	<p>Assessment is treated as "learning about learning" and is deeply intertwined with the learning process which is itself based on authentic learning experiences.</p>
<p>Self and Peer Assessment</p>	<p>Assessment is essentially a formal process that is done by teachers <i>to</i> the learners.</p>	<p>Self and peer-assessment are used by some teachers at certain points in time.</p>	<p>Teachers are encouraged by the management to invite their learners to practice self and peer-assessment.</p>	<p>Self- and peer- assessment is integrated into the organisation's policy and is celebrated as a competency in its own right.</p>	<p>Teachers and learners are treated equally, i.e. learners assessment of teachers is regarded as 'peer-assessment' within the learning community.</p>

People -Teaching Staff

	Aware	Exploring	Developing	Integrated	Transformative
Techno-literacy	The general level of staff's techno-literacy is limited to the use of pre-configured tools and systems.	Some techno-literate teachers critically review the current provision of technologies and experiment, recommend new tools and practices.	The general level of techno-literacy of staff is sufficient to develop innovative projects based on emerging tools and practices.	The institutional policy is committed to the development of techno-literacy in relation to content, pedagogical and technological skills and encourages the emergence of leaders.	The organisation is experienced as a living laboratory where new technologies and practices emerge. The organisation is also aware of axiological values that drive techno-literacy development.
Digital content creation	The digital material used for learning is dependent on external decisions and provision.	A limited number of teachers are actively using/producing digital content to plan and support learning activities.	Teachers are regular and active creators/remixers of digital content. Some of the content produced is published in learning resource repositories.	The organisation recognises teachers as creators of digital content and encourages the creation of cross-curricular contents shared in learning resource repositories.	Teachers work collaboratively beyond institutional borders for the creation/remix of learning resources and for seeking peer feedback.
Digital environment management	The organisation's digital environment is dependent on external decisions and provision.	Some teachers aggregate open and free resources to create ad-hoc digital learning environments.	The organisation has emerging internal competencies to create their own tailored learning environments to experiment with new practices.	The organisation has the internal competencies for being fully autonomous in the choice of its learning technology — which is interoperable with external systems.	Mastering the competencies required to create and update a tailored learning environment, allows the organisation to re-engineer its learning provision.
Continuing professional Development	Continuing professional development (CPD) is limited to attending occasional training sessions.	There is a central system to plan learning and development in line with the need for competencies within the organisation. The system is mainly used by the management.	CPD is integrated into everyday professional practice. Reflective practice is a key component of CPD, triggering the need for reading, getting feedback, attending conferences, training sessions, etc.	CPD has a transformative effect on the organisation through the emergence of educational leaders. Learned and informed staff is fully empowered to influence and co-design the organisation's policy and management.	CPD has a transformative effect on society. Learned and informed staff is fully empowered to influence and co-design the learning policies at local, regional and national levels.

People - Learners

	Aware	Exploring	Developing	Integrated	Transformative
Techno-literacy	The general level of learners' techno-literacy is limited to the use of pre-configured tools and systems.	Some techno-literate learners critically review the current provision of technologies and experiment with emerging tools and practices, e.g. makers.	The general level of techno-literacy of learners includes the ability to system thinking and complexity. Techno-literate leaders are emerging.	There is a policy to develop the general level of techno-literacy of learners and recognise the contribution of leaders.	The organisation is experienced as a living laboratory where new technologies and practices emerge.
Digital content creation	Learners are familiar with digital content creation, but not in relation to their learning.	Some learners create digital content in relation to their learning — e.g. notes, recordings, blogs, etc.	Learners are regular and active creators/remixers of digital content.	The organisation recognises and celebrates learners as creators of digital content working collaboratively.	Learners from different levels of maturity and places actively collaborate in the creation/remix of digital contents.
Digital environment management	Learners are familiar with operating complex digital environments out of the institution (e.g. games), but not in relation to their learning.	Some teachers encourage learners to use their own combination of technologies to create their Personal Learning Environments (PLE).	The organisation encourages learners to create their own personal learning environment to organise and capture all their learning, formal and informal.	The organisation recognises and celebrates learners ability to create and manage their personal learning environment.	The organisation has policies and systems to make learners the co-designers of the organisation's digital learning environment, according to their talents and maturity.

Technologies

	Aware	Exploring	Developing	Integrated	Transformative
Open technologies	The issue of open technologies (content, tools, standards, etc.) has been identified and will be addressed.	The learning community is exploring the benefits and challenges associated with using/producing open contents, tools, standards.	The organisation is developing an <i>open culture</i> , where open contents, tools, standards, etc. are the organising references for the selection and production of resources for learning.	The organisation has a clear policy regarding the promotion and exploitation of Open 'Things' (OER, Open Knowledge, Open Standards, Pên Trust, etc.). It is co-designed with all the stakeholders of the learning community.	The various Open 'Things' (OER, Open Knowledge, Open Standards, Pên Trust, etc.) are clearly placed in the perspective of building an Open Society together.
ICT / digital technologies Policy	The lack of ICT policy has been identified as an obstacle to the efficiency of the investments in ICT for learning.	The organisation is committed to the design and implementation of an ICT policy developed through consultation of all stakeholders across the institution.	The ICT policy is regularly monitored, reviewed and evaluated in the context of the organisation's other policies, in line with the organisation's vision and goals and involving all stakeholders.	The organisation has a well-established, successful and rigorous framework for monitoring and reviewing all its strategies and policies and the monitoring and reviewing of ICT within this framework and takes into account local, regional, sectoral and national priorities.	Organisation's leaders are actively involved and recognised in innovation networks, beyond the institutional boundaries.
Digital technologies for Innovation	Digital technologies mainly used to support previously established practice — e.g. use an interactive white board to deliver lectures or the Internet to deliver distance courses.	Individual projects explore how digital technologies could transform current learning and teaching practices.	There is a climate conducive to innovation using digital technologies to transform learning and teaching practices. Teachers and learners are fully empowered to lead innovation and challenge the status quo.	The organisation has a policy encouraging all stakeholders to place innovation at the centre of the learning and teaching process and to use digital technologies to support innovation across disciplines.	The use of digital technologies is primarily sought to support innovation and organisational transformation.

Copyright and Licensing	The lack of copyright and licensing policy has been identified as an obstacle to the efficiency of the learning infrastructure.	Information relative to copyright and licensing is easily accessible and all stakeholders have been notified of where to find it.	Teachers and learners are encouraged to respect copyright and licensing and apply them to their own production. The use of open and liberal copyright and licensing schemes is encouraged.	The organisation has a policy regarding the respect of copyright and licensing while promoting the use of liberal schemes (e.g. creative commons, copyleft) for its consumption and production.	Learners and teachers are active advocates and supporters of Open Knowledge and Open Educational Resource initiatives.
Privacy policy	Privacy has been identified as an issue that should be addressed.	Privacy is dealt with on an ad-hoc basis by individual teachers.	The organisation is committed to protecting privacy through establishing policies and implementing privacy technology — e.g. privacy by design.	The institution's privacy is fully integrated in the ICT policy. The technical infrastructure is fully compliant with regulations and best practices regarding privacy.	The organisation is part of a trust infrastructure, a federation facilitating the exchange of personal data under the control of the individuals.
Social media	Social media has been identified as a problem and/or an opportunity.	Social media is used through individual initiatives.	The organisation is exploring the use of social media to promote a participative and contributive culture, to encourage self-directed learning and reciprocal teaching.	Social media is used systematically to create or participate in communities of interest and abolish barriers between disciplines.	Social media has a transformative effect creating a participative and contributive culture.
Accessibility	Accessibility has been identified as an issue that should be addressed.	There are a limited number of digital tools and resources accessible to people with disabilities.	Learners with disabilities have the opportunity to have their say regarding the accessibility of digital resources and tools.	The organisation has a policy regarding the accessibility of resources and tools, whether produced externally or internally. The effects of this policy is regularly reviewed.	The creation of resources and tools accessible is not experienced as a constraint, but as an opportunity to design for all.
Connectivity	There are few computers located in dedicated and controlled spaces.	When needed, teachers can provide learners with access to digital technologies and the Internet.	When they need, learners have free access to a digital device (computer, tablet or smartphone) and the Internet.	All learners have their own device. The institution has a policy encouraging to “bring your own device” (BYOD).	Using the institution's infrastructure, learners and teachers explore the potential of “the Internet of Objects.”
Digital content	The digital material used for learning is produced outside of the institution.	The organisation has engaged in reflection on the policy regarding the provision and internal production of digital content for learning.	The organisation is working with all stakeholders to establish a policy regarding digital content.	The institution has a policy regarding digital content, e.g. subscribing to and contributing to a federation of learning resources repositories.	Learners and teachers actively contribute to the curation of the Internet for the benefits of the learning community.

<p>Digital learning environment</p>	<p>The digital learning environment is institution-centred and/or externally controlled.</p>	<p>Teachers, learners and other stakeholders are invited to contribute to the selection and configuration of the digital learning environment.</p>	<p>The digital learning environment is co-designed with teachers, learners and other stakeholders.</p>	<p>The organisation's digital learning environment works seamlessly with learners and teachers own personal learning environments.</p>	<p>Learners and teachers actively contribute to the reflection and the design of the future of personal learning environments.</p>
<p>Technical support</p>	<p>The need for technical support has been identified as an issue.</p>	<p>Technical support is dealt with on an ad-hoc basis by volunteer teachers.</p>	<p>Technical support is dealt with on an ad-hoc basis by volunteer teachers and learners.</p>	<p>There are clearly identified resources for technical support, either internal or external, depending on the internal competencies and/or needs.</p>	<p>The practice of technical support is valued and recognised as a learning opportunity.</p>

ePortfolios

	Aware	Exploring	Developing	Integrated	Transformative
Adoption	There is little implementation of ePortfolios anywhere in the institution, although there are no barriers to impede individuals from proceeding.	ePortfolio practice is limited to a small number of innovators. ePortfolios are not perceived as a challenge to current practice.	A significant number/critical mass of staff are developing ePortfolio practice across the curriculum. Leaders and champions are being recognised.	Everybody in the organisation has an ePortfolio and/or is contributing to a collective ePortfolio. ePortfolios are embedded in the institution with the support of senior leadership and advocacy.	Learners and staff engagement almost universally positive. ePortfolios used as a central tool for building both institutional and personal constructions of individuals' activity, achievements, life and identity.
Motivation / Ownership	Learners & institution introduced to benefits of ePortfolios, with little ownership.	The motivation for learners to create ePortfolios is mainly extrinsic, e.g. a requirement from individual teachers or the institution.	The institution is committed to ensuring individual ownership of ePortfolios and learners are actively involved in the decision process.	Learners are intrinsically motivated and have full ownership of their ePortfolios. This is demonstrated by the continuation of individual ePortfolios beyond the time of study within the institution.	Portfolios are a central tool for building institutional and personal constructions of individuals' activity, achievements, life and identity.
Innovation	ePortfolios are used to support current processes, e.g. grade a portfolio instead/with an essay.	ePortfolios are used to explore alternatives to grades and examinations and/or to support the implementation of personal learning environments.	The development of ePortfolios challenges dominant teaching and institutional practices.	ePortfolios are recognised as a key means to developing learners and teaching staff identities.	
Leadership	Leaders express support for ePortfolio practice but have not taken any actions.	Leaders/champions of ePortfolio practice have emerged but are not yet recognised by the institution.	Senior staff and educational leaders are committed to establishing a shared vision of ePortfolio practice and how it relates to the organisation's overall mission.	Senior staff and educational leaders can articulate a clear vision of how ePortfolio practice will develop and might transform learning and the curriculum.	Senior staff and educational leaders contribute to the overall ePortfolio vision and strategy at local, regional and national levels.

Content: Evidence & Reflection	Learners are collecting content with little reflection or connection to potential ePortfolio purpose	Learners have little choice over the content of the ePortfolio, which is prescribed by the institution.	The institution is committed to letting learners choose and control the content of their individual ePortfolios and keep separate individual ePortfolios and institutional ePortfolios.	Learners have full control over the content of their ePortfolios, while the institution has full control over the content of the information learners need to provide for monitoring the learning process.	The information collected for/provided to the institutional ePortfolios is seamlessly collected from the content of the individual ePortfolios.
Access: Choice of Tools	Learners have access to a variety of tools but do not know how they can be used to support the ePortfolio process.	Access to ePortfolios is fully under institutional control and supervision. Learners do not have the choice of tool for managing their ePortfolios.	The institution is committed to letting learners use the tools of their choice for managing their ePortfolios.	The institutional policy for individual ePortfolios is inspired by BYOD (bring your own device).	Learners have access to ePortfolios with any device, from anywhere, for any purpose, supporting lifelong learning.
Policy	There are policies under consideration but no commitment from leadership.	The institution is working on establishing an ePortfolio policy with the different stakeholder groups.	The institution has a clearly articulated ePortfolio policy regarding the different stakeholder groups, including staff ePortfolios.	Data collected from ePortfolios is used as prime source to inform the organisation's policy.	ePortfolios data is used as prime source of information to inform policies at local/ regional/national levels.
Strategy	There is an awareness of a need to plan, but no ePortfolio plans in place.	Only individual initiatives have action plans.	There is a solid institutional commitment and there are identifiable sponsors committed to developing cross-curricular plans.	Internal ePortfolio initiatives are coordinated and plans are regularly reviewed to insure cross-curricular development.	ePortfolio initiatives are coordinated with external bodies beyond the institutional boundaries.
Continuing Professional Development	There is a recognized need for CPD to implement ePortfolios but no activities.	Some members of the staff have their own ePortfolio, blog or personal web space.	Every member of the supporting staff has an ePortfolio and shares their reflective practice.	Staff ePortfolios are used for annual appraisal, planning continuing professional development, etc.	Staff ePortfolios interact seamlessly with communities of practice, beyond the boundaries of the organisation
Quality management	There is awareness of potential for using ePortfolio data for quality management, but no activities.	ePortfolio data is used by individual members of staff to monitor and improve the quality of their services teaching (, assessment, etc.).	The organisation is committed to using the data collected from individual and organisational ePortfolios as a main source of information for quality management.	Individual progress and achievements are aggregated at organisational level to produce an organisation's quality management ePortfolio that is used internally for self-evaluation.	The organisation's quality management ePortfolio is used for by external bodies for quality assurance (e.g. ISO 9000, TQM, etc.) or professional accreditation (e.g. AACSB, ABET, etc.)

Partnerships	There is awareness of the need for partners, but little action.	A number of potential partners have been identified—experts, consultancy, etc.	Partnerships have been established to support the development of an ePortfolio strategy, action plan and implementation.	There is a culture of active, collaborative work and of sharing resources and expertise with other organisations exploiting ePortfolios.	The organisation is actively involved in a number of ePortfolio partnerships with local, regional, national and international partners.
Impact	There is not enough ePortfolio practice to have an impact, but some awareness of the potential.	ePortfolio practice within the institution generates interest but no real commitment.	Systems are in place to collect data on ePortfolio practice to measure their impact.	The collection of data related to ePortfolio practice is reviewed and analysed to inform further developments.	ePortfolio practice has global impact on the organisation, changing the organisational culture.
Sustainability	Some are aware of the need for ongoing support, but no budget.	ePortfolio practice is supported on an ad hoc basis, e.g. via project funding or individual initiatives.	Some areas of the organisation regularly earmark funds to support ePortfolio practices.	The institutional budget regularly assumes and includes a commitment to ePortfolio practice and its development.	There is no need to earmark ePortfolio budget as ePortfolios are fully blended within institutional infrastructure and practice.

ePortfolios – Technologies

	Aware	Exploring	Developing	Integrated	Transformative
Usability	Recognised need for easy-to-use ePortfolio tools	The organization has conducted a pilot test of ePortfolio tools to assess the usability for all technical competency levels of users.	The interface of the tools used to support ePortfolio processes are reasonably well designed and easy to use. Tools are documented with tutorials and online help.	There is a consistent interface between the different tools used to create and exploit ePortfolios (e.g. between a LMS and an ePMS).	The lessons learned from using tools is used to feed-back the design, selection and integration of the tools used to support ePortfolio processes.
Integration	Recognised need to integrate tools with ICT infrastructure.	Technologies to support ePortfolio practice are fragmented across multiple tools and are not connected to the current information system architecture.	There are clear plans to integrate ePortfolios within the institutional information system to allow seamless flow of information from/to ePortfolios.	ePortfolios are fully integrated in the information system. The <i>centre of gravity</i> of the information system has moved from the institution to the individual.	The ICT infrastructure is person/identity centric and extends beyond organisational boundaries -e.g. clients, suppliers, professional bodies, regulatory and awarding bodies.
Management	Recognized need for ePortfolio infrastructure to support both institutional and individual implementation.	Individual ePortfolio infrastructure is managed by the institution <i>for</i> the learners. There is no clear distinction between tools for individual and institutional ePortfolios	Individual ePortfolio infrastructure is managed by the institution <i>with</i> the learners.	Individual ePortfolio infrastructure is fully managed by the learners.	Individuals are able to maintain their ePortfolio after leaving institution, as part of a lifelong learning personal learning environment (PLE).
Institutional ePortfolios	Recognized need for an ePortfolio Management System (ePMS), to collect data to support organisational processes such as assessment, accreditation, etc.	There is an ePortfolio Management System (ePMS) but it is not integrated in the information system. Personal ePortfolios must be created within the ePMS.	The organisation is committed to letting learners choose their own tools to manage their personal ePortfolios. The ePMS is used to support organisational processes such as assessment, accreditation, etc. using data from individual ePortfolios.	The ePMS leaves learners free to choose their own environment for their personal ePortfolio – BYOD (bring your own device) applied to ePortfolios. The interaction between individual ePortfolios and the ePMS is seamless.	The ePMS interacts seamlessly with external information systems and learners can use their own ePortfolios across multiple learning environments and institutions.

<p>Individual ePortfolios</p>	<p>Recognised need to provide individual spaces for learners to establish their identity as learners and/or (future) professionals.</p>	<p>There are a variety of platforms that have been identified where users can maintain individual ePortfolios.</p>	<p>Organisation provides support for a variety of platforms for individuals to have their own spaces and tools supporting ePortfolio processes.</p>	<p>Each one is free to use the tool of their choice to manage their ePortfolio. Individual and institutional ePortfolios work seamlessly.</p>	<p>The individual owns their own online space to support ongoing development of ePortfolios across different professional stages. The ePortfolio is part of an individual's online identity, under a unique domain name.</p>
<p>Interoperability</p>	<p>The need to exchange information to/from ePortfolio has been identified, confronting the issue of abandoned ePortfolios developed at different institutions.</p>	<p>It is possible to import/export ePortfolios from/to external sources — e.g. using the LEAP2A or Europass specifications.</p>	<p>The organisation is committed to implementing a trust architecture, to support seamless exchange of data from/to ePortfolios across a federation of services/identities — e.g. using Shibboleth or UMA (Kantara) specifications.</p>	<p>The content of ePortfolios is stored in personal data stores/ personal lockers that are fully under the control of individuals. Exchange of data is performed through a federation of services/identities.</p>	<p>The institution is a member of a large federation of services/ identities with representatives from the most important stakeholders — educational institutions, awarding bodies, employers, etc.</p>
<p>Open Data</p>	<p>There is an interest in exploiting the data generated during the learning/ePortfolio process to provide services such as learning analytics</p>	<p>There are initiatives to explore how ePortfolio data can be used to provide new services, beyond those traditionally assigned to portfolios.</p>	<p>The organisation is committed to using the data generated during the learning process to provide innovative services to individual learners and the learning community at large.</p>	<p>There is a seamless in/out flow of data between ePortfolios and other elements of the institution's information system. The ePortfolio owner is in control of the data flow.</p>	<p>There is a seamless flow of data between ePortfolios and other information systems, beyond the walls of the institution.</p>

Open Badges

	Aware	Exploring	Developing	Integrated	Transformative
Adoption	There is little implementation of Open Badges anywhere in the institution, although there are no barriers to impede individuals from proceeding.	Open Badges practice is limited to a small number of innovators. Open Badges are not perceived as a challenge/opportunity to current practice by the institution.	A significant number/critical mass of staff/learners are developing Open Badges practice across the curriculum.	Open Badges are embedded in the institution with the support of senior leadership and advocacy, as well as learners and staff.	Learners and staff engagement almost universally positive. Open Badges used as a central tool for building both institutional and personal construction of individuals' activity, achievements and identity.
Motivation / Ownership	The need for alternative methods for recognising learning and credentialing has been identified.	The motivation of learners for Open Badges is mainly extrinsic, e.g. a requirement from individual teachers or the institution.	Learners are actively encouraged to co-design the Open Badges eco-system, including through the design and delivery of their own Badges.	All stakeholders are actively involved in the co-design of the Open Badges institutional eco-system. There is a shared understanding that Open Badges should not be used as 'extrinsic rewards.'	All stakeholders are actively involved in the co-design of the Open Badges eco-system, beyond institutional boundaries, to create a learning organisation.
Open Badges for Innovation	Open Badges are used to support current processes, such as replacing/associating an existing grade with an Open Badge.	Open Badges are used to explore alternative to existing credentialing and methods for recognising learning achievements and competencies.	The development of Open Badges challenges dominant teaching and institutional practices.	Open Badges are recognised as a key means to develop the <i>trust capital</i> of learners, and teaching staff through establishing <i>networks of trust</i> .	The establishment of networks of trust, based on Open Badges, challenges the current methods for credentialing, recruiting, etc. As a learning organisation, it is reinventing itself.
Leadership	The lack of Open Badges leadership has been identified as an issue.	Leaders/champions of Open Badges practice are emerging but are not yet recognised by the institution.	Senior staff and educational leaders are committed to establishing a shared vision of Open Badges practice and how it relates to the organisation's overall mission.	Senior staff and educational leaders can articulate a clear vision of how Open Badges practice will develop and might transform learning, assessment and the curriculum.	Senior staff and educational leaders contribute to the overall Open Badges vision and strategy at local, regional and national levels.

Policy	The lack of an Open Badges policy has been identified as an obstacle to innovation.	A document relating to existing Open Badges policies has been curated and distributed to the teaching staff.	The different stakeholder groups, have been invited to contribute to the definition of the Open Badges policy.	There is an Open Badges policy. Data collected from Open Badges is used as a prime source in informing the organisation's learning & teaching policy.	Open Badges data is used as prime source of information in informing policies at local/ regional/national levels — e.g. mapping the competencies of a territory.
Strategy	The lack of Open Badges strategy has been identified as an obstacle to innovation.	Only individual initiatives have action plans.	There is a solid institutional commitment and there are identifiable sponsors committed to developing cross-curricular plans.	Internal Open Badges initiatives are coordinated and plans are regularly reviewed to insure cross-curricular development.	Open Badges initiatives are coordinated with external bodies beyond the institutional boundaries.
Partnerships	A number of Open Badges potential partners have been identified—experts, consultants, developers, etc.	Individual teachers have established partnerships with external parties to implement, run and/or review their Open Badges practice.	Partnerships have been established at organisational level to support the development of an Open Badges strategy, action plan and implementation.	There is a culture of active, collaborative working and of sharing resources and expertise with other organisations designing/using Open Badges.	The organisation is actively involved in a number of partnerships with local, regional, national and international partners.
Impact	Open Badges practice within the institution generates interest but no real commitment.	Open Badges have a limited, localised, impact on the organisation's learning and teaching practice, etc.	Stakeholders have been invited to contribute to measuring the impact of Open Badges.	Procedures are in place for the systematic collection of data relative to measuring the impact of Open Badges.	Open Badges practice has global impact on the organisation, changing the organisational culture.
Sustainability	The need for securing resources to support Open Badge initiatives has been identified.	Open Badges practice is supported on an ad hoc basis, e.g. via project funding or individual initiatives.	Some areas of the organisation regularly earmark funds to support Open Badges practices.	The institution's budget regularly assumes and includes a commitment to ePortfolio practice and its development.	There is no need to earmark Open Badges budget as they are fully blended within institutional infrastructure and practice.