

# Education Scotland

## Glow Data Privacy Impact Assessment

Version 6 – May 2018

In partnership with



# Version Control

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Version	Date	Summary of Changes
1.0	May 2015	First version – includes assessment of O365 service only
2.0	Feb 2016	Second version – includes assessment of all services in Glow after engagement with Product Owners, ISO, DMG group, NDLF, Glow Key Contacts and TOAG. To be issued to ICO for information after publication.
3.0	Jun 2016	Update focused on O365 additions and inclusion of Privacy and Cookie policies. Stakeholder review by Product Owners, Information Security Officer, DMG group, NDLF, and Glow Key Contacts.
4.0	Aug 2017	Revamp of report format and update one year on from last published version.
5.0	Nov 2017	Addition of Google and removal of Glow Wikis
6.0	May 2018	Reviewed and updated for the GDPR

# Executive Summary

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The following Privacy Impact Assessment (PIA) assesses the privacy implications associated with the use of Glow, Scotland's national service to support digital learning and teaching.

This assessment aims to inform parents, guardians and teaching staff of privacy implications that exist with the use of Glow. Please note that this is not a detailed, technical analysis of the security controls in place for each Glow service. Due to the sensitivity of this information, Glow's technical security documentation has not been published, however, it can be made available where appropriate.

The nature and purpose of Glow as an online learning tool inevitably brings privacy concerns. Education Scotland has identified, assessed and analysed privacy implications associated with Glow and believe that suitable steps have been taken in order to manage any potential privacy impacts which could occur as a result of using Glow. These steps include:

- The "Report a Concern" service which provides users with a quick and efficient way to report anything relating to Glow that has caused offense, or concern. This service is managed by Education Scotland seven days a week to ensure swift action can be taken to any security or privacy issues.
- The development of Glow community rules to support all users in the appropriate use of Glow online services, made available on Glow Connect.
- The development of additional guidance for teachers and support staff to make clear the type of data that should be stored within Glow, made available on Glow Connect.
- The development of a statement of audit requirements, detailing the range of information that will be retained and, where necessary, provided in order to respond to an instance of inappropriate use.
- A security review of all applications is carried out to ensure any app Education Scotland adds to Glow does not weaken the security of the service or breaks Data Protection compliance.

In addition to this, Local Authorities and schools are encouraged take additional actions to ensure pupils understand how to protect themselves on the internet and how to use Glow appropriately.

Education Scotland regularly consults a variety of stakeholders, including pupils and parents, when there is a change in Glow's functionality which impacts on the privacy of Glow users. The key overarching message arising from Education Scotland's extensive stakeholder engagement is a widely shared view that the educational benefits of Glow outweigh any potential privacy risk, on balance.

Any questions or comments regarding this document should be emailed to [enquiries@glow.gov.uk](mailto:enquiries@glow.gov.uk).

# Glossary

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## **Glow Connect**

Glow's public website that has additional information on the Glow service.

## **Glow Customers**

Glow Customers are those who contribute directly to the education of children in Scotland. These establishments are required to sign the Glow Agreement to allow learners and teachers in their establishment to consume the Glow services. Glow Customers comprise of the following groups:

- Local Authorities;
- Independent schools; and
- Higher Education and Further Education Establishments

## **Glow Key Contacts**

Glow Key Contacts are recognised individuals from each Glow Customer who Education Scotland communicate with on all Glow matters. The key contacts are responsible for Glow communication and awareness within their establishments.

## **Glow Launch Pad**

The landing page all users see when they log into Glow. The Launch Pad has tiles representing the services that Glow users have access to.

## **Glow Users**

Glow users are the learners and educators within Scotland who have Glow accounts and use the Glow services.

## **Glow Agreement**

The Glow Agreement is the agreement between Education Scotland and each Glow Customer who have signed up to use the Glow service.

## **Google Addendum**

The Google addendum is the additional agreement between Education Scotland and each Glow Customer who have signed up to use G-Suite for Education.

## **SEEMiS**

SEEMiS is a supported management information system used in Scottish local authority schools to record pupil information such as personal information and attendance. Glow accounts are provisioned based on the data received from SEEMiS.

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# 1. Introduction

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## 1.1 What is a Data Privacy Impact Assessment?

All services that involve the handling of personal information have a potential impact on privacy. It is important that steps are taken to understand and minimise those impacts as far as possible.

A Data Privacy Impact Assessment (DPIA) identifies privacy considerations in collaboration with those people who are affected. The aim is to ensure that the service and its benefits are delivered in a way that meets data protection requirements and public expectations of privacy.

More information about Data Privacy Impact Assessments is available on the website of the Information Commissioner's Office ([ico.org.uk](http://ico.org.uk)).

## 1.2 Glow Services

This document is the DPIA for Glow, Scotland's digital environment for learners and teachers. Glow has five core services that have been evaluated as part of this assessment:

1. Authentication
2. Microsoft Office 365
3. Blogs
4. Meet
5. G Suite

More information about these individual services is available in Annexes 1 to 5.

## 1.3 DPIA Audience

The assessment is designed to inform parents, guardians and teaching staff of the risks associated with the use of Glow. This DPIA provides an introduction to Glow, explaining what Glow is, its benefits for learning and teaching, and the nature of the information included on the system. The assessment then sets out the potential privacy impacts that have been identified in relation to Glow's services, and the steps being taken to manage those risks, building on the extensive engagement activities undertaken with stakeholders.

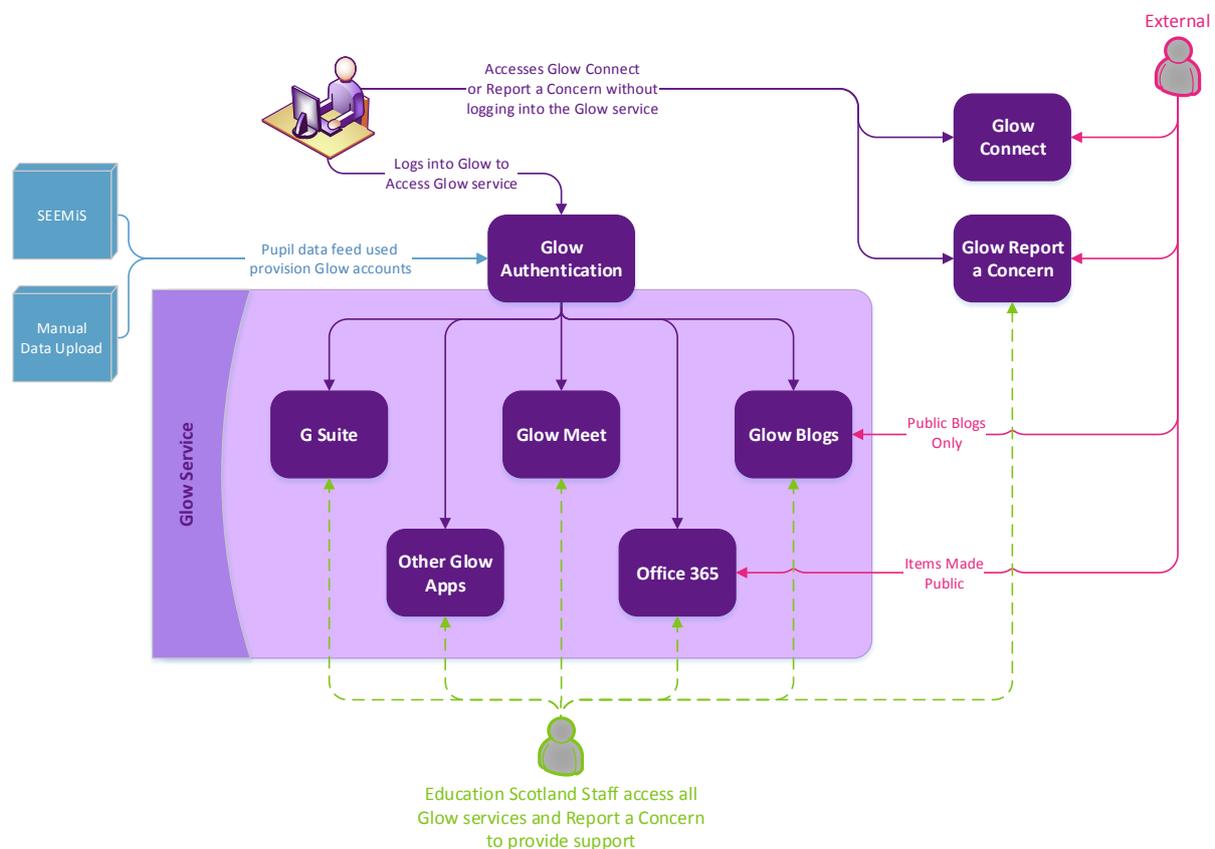
It should be noted that many of the privacy impacts highlighted through this DPIA are not limited to Glow and could equally apply to the use of other digital learning and teaching services, although each solution may require a DPIA.

## 2. Glow

### 2.1 What is Glow?

Glow is the Scottish digital environment made available by Education Scotland to support and promote the development of digital skills for the 3-18 curriculum. Technology has fast become embedded in most aspects of modern life, and it has the potential to deliver benefits for learning and teaching in Scotland's schools. Diagram 1 shows a high level overview of the components that make up the Glow service.

Diagram 1



### 2.2 Glow services

Glow is a unique learning environment that provides access to a wide set of innovative digital tools and resources designed to enhance learning and teaching across the whole curriculum.

#### 2.2.1 Authentication

Glow services are accessed by learners and teachers using a unique username and password. Glow provides Single Sign On, which means Glow users log on once to access all

Glow services (please see Annex 1). All SEEMiS schools have their teacher and learner accounts automatically provisioned. SEEMiS operate an opt-out process which allows individuals, schools or local authorities not to have a Glow account created or remove one that is already created.

### **2.2.2 Microsoft Office 365 (O365)**

This service includes a broad range of features including, the ability for learners to contribute to local or national conversations, create and edit documents, presentations and spread sheets while also providing all users with personal online storage and email. The following services are core O365 services supported by Education Scotland:

- Office Online (Word, Excel, PowerPoint) & Office 365 ProPlus
- OneNote (including Class Notebook and Staff Notebook)
- Outlook Email
- OneDrive for Business
- Teams for Education
- Yammer
- Sway
- O365 Video
- Forms
- Delve
- SharePoint
- Planner

More information on these services are described in Annex 2.

### **2.2.3 Glow Blogs**

This service enables learners to develop and publish personal, class or school blogs, helping them to develop skills in written communication and presentation. Glow Blogs supports learners to reflect on personal learning experiences and to share and discuss them with others (please see Annex 3).

### **2.2.4 Glow Meet**

This web conferencing service uses Skype for Business to support learners and teachers to connect and share learning experiences with peers across Scotland. Teachers can set up online meetings in a variety of ways to support learning, including inviting others out with Glow and sessions can be recorded and shared.

(please see Annex 4).

### **2.2.5 G Suite**

G Suite for Education is set of cloud-based productivity tools for communication and collaboration. G Suite for Education in Glow offers the following cores services: Classroom, Drive, Docs, Hangouts, Calendar, Contacts, Sites and Vaults. (please see Annex 5).

## **2.3 Glow benefits**

Collectively, the set of digital tools and resources provided in Glow are designed to deliver important benefits for every child, young person and teacher in Scotland's schools.

The services enable interactive, accessible and collaborative learning experiences across all curriculum areas, that are responsive and relevant to Scotland's children and young people. The services also support teachers across Scotland to work innovatively and collaboratively, and have the potential to serve as a key national hub for professional development.

A literature review commissioned by the Scottish Government identified evidence from academic research that the effective use of digital technology can have a positive impact on learning and teaching in a variety of key areas. This includes:

- Conclusive evidence that the use of digital technology can support educational attainment in general (and in math and science particularly);
- Indicative evidence that it can help to close gaps in attainment amongst learners; and
- Promising evidence that the use of digital technology can help to enable: assistance for learners with additional support needs; improvements in employability skills; improved communications with parents; and time efficiencies for teachers.

The full literature review is available here:  
<http://www.gov.scot/Publications/2015/11/7786>

## 3. Information in Glow

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The vast majority of the information in Glow is educational content, either provided by Education Scotland or generated by learners and teachers. The following key principles are applied in respect of all information shared on Glow:

- All information sharing must occur within the bounds of the Data Protection Act 1998 (DPA), the EU General Data Protection Regulations (GDPR) and the European Convention on Human Rights (ECHR), in that it should be proportionate, relevant and appropriate for the purpose it is being shared.
- All sharing must be evidenced, accounted for, and recorded.
- All sharing should take place within the bounds of any agreed Data Sharing Agreements.
- Each undertaking of sharing requires a decision to be made – so it is expected that information will not follow the child unless completely necessary.
- Information about a child which is required for the purposes of gaining access to Glow will not be shared by Glow services for any other purpose unless it is necessary to safeguard, support and promote the child's wellbeing.
- Confidentiality and respecting a child's right to privacy will be the default position in respect of any decision to share information with others.

Learners and teachers can create original content such as documents, sites, groups, forms, blogs and videos that have the potential to include personally identifying information. There is user guidance in the form of published Glow Community Rules which advises against storing personal information above that which is already automatically included. Only a small amount of personal information is automatically included in Glow, this includes information to allow access to be granted to the service and information about users such as local authority, school and role.

In addition, [Glow Cookie Policy](#) and [Privacy Policy](#) have been made widely available across the Glow services. Where possible this is linked in a pop up, page footer or is prominently available through the Glow Launch Pad and Glow Connect. The Cookie Policy gives users information about what cookies are and the cookies created by Glow services. The Privacy Policy explains how any information given by the users will be used by Glow and the ways in which their privacy is protected.

For most learners, their personal information is received from a system called SEEMiS, used by schools to record learner information. For others, such as learners from independent schools, this information is received via controlled file transfer process.

The personal information automatically included on the system that could potentially be seen by other Glow users includes:

Audience \ Personal Information	Glow Users	Externally Shared	Local Authority Admin	Education Scotland and System Admins
Forename	✓	✗	✓	✓
Surname	✓	✗	✓	✓
Username	✓	✗	✓	✓
Display Name	✓	✗	✓	✓
Role	✓	✗	✓	✓
School	✓	✗	✓	✓
Glow email address	✓	✗	✓	✓
Local authority	✓	✗	✓	✓
Year of Entry (Pupils only)	✓	✗	✓	✓
Group data(Stage/Teaching groups)	✓	✗	✓	✓
Date of birth	✗	✗	✗	✓
Home email address	✗	✗	✗	✓
SEEMiS Identifier	✗	✗	✗	✓
Pupil/Teacher Identifiers (Colleges/Universities etc)	✗	✗	✗	✓

In the circumstance whereby a user has chosen to share content externally the following Glow information could potentially be seen by non-Glow users:

If a user chooses to share content externally	
Personal Information	Externally Shared
Email Address	✓
Display Name	✓
Username	✓

## 4. Glow Users

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Customers of Glow are required to ensure controls are in place to manage who is allowed access to the service and what access rights are granted to those users. Those responsibilities are described in the Information Security Policy for Glow and feature in the Glow Agreement which exists between the Scottish Government and each Glow customer.

Separate guidance on guest and partner access has also been produced:

- A Partner is a person or persons with a need to access Glow services and belongs to an organisation that contributes to educate pupils or teachers within Glow. Glow Customers have the ability to allow Partners to access to certain Glow services. All Partner accounts are manually expired at the end of the academic year, although they can be reset if required.
- A Guest is a person or persons that needs temporary access to log into Glow to access one or more of the available Glow services. Guest account access is limited to any Services available via Glow authentication, except O365. All Guest accounts are manually expired at the end of the academic year, although they can be reset.

**NB:** Where a Glow Customer only has a need to share specific content such as individual documents or a SharePoint site, this can now be done using External Sharing capabilities rather than having to create a separate Partner or Guest account that allows wider access to Glow services and data. Please note, only teachers have access to external sharing functionality currently, this may be reconsidered in future.

## 5. Stakeholder Engagement

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The Glow service has been established to support and promote the development of digital skills in learners aged 3-18, therefore, Education Scotland recognises the importance of involving stakeholders consistently. An initial consultation was carried out in 2014 with a number of key stakeholders and the results of this consultation were captured in a series of reports, details of which can be found in Annex 6.

### 5.1 Involving stakeholders

Education Scotland have a number of key stakeholder groups which are consulted on the Glow service, especially with regards to new functionality or updates to the service. All updates to Glow are considered from at least four key points of view; a user of the Glow service, the educational benefit, the technical feasibility and the security and risk perspective. The key external groups that Education Scotland engage are the Glow Key Contacts, the Digital Leaders, the Scottish Local Authority Security Group (SLAISG) and the Glow Product Owners.

As Glow contains 'evergreen' services such as Microsoft Office 365 and G Suite, revisions of the DPIA will be informed by engagement with one or more of the above stakeholders, but not necessarily all. This means that frequent updates are sustainable. The extent of consultation will depend on the scale of new functionality in Glow that is being assessed and any additional privacy risks identified as a result of these changes.

## 6. Privacy Risks

Privacy considerations are assessed in this section via hypothetical risk scenarios. These risk scenarios are continually evaluated by Education Scotland with input from Glow stakeholders, to ensure the best controls are being put in place to mitigate these scenarios being realised.

### 6.1 “Teaching staff may use Glow to store sensitive information”

Potential Impact	Education Scotland Response
<ol style="list-style-type: none"> <li>1. If sensitive information is lost or shared with the wrong person via Glow, this could cause significant distress to those involved and have safety implications.</li> <li>2. This could also result in a potential breach of legal obligations as defined under Data Protection Act 1998, should insufficient technical or organisational steps be taken to protect personal information.</li> </ol>	<ol style="list-style-type: none"> <li>1. Glow Community Rules have been produced for learners and teachers, supporting them to use Glow in a safe and positive manner. The rules make clear that sensitive information must not be stored or shared in Glow.</li> <li>2. Report a Concern function allows anyone to report issues or concerns they have about Glow. This service is monitored by Education Scotland staff 7 days a week.</li> <li>3. An Information Security Policy has been developed which describes the steps being taken by Education Scotland.</li> <li>4. A Customer Risk Report is produced for Glow Customers in order to highlight areas of risk to customers and to suggest mitigating actions.</li> </ol>
Remaining Risk	
<b>Medium</b>	The actions taken have reduced the likelihood of this issue occurring. In order to minimise risk, there remains an obligation on users to follow the guidance provided.

### 6.2 “Children may share personal data or inappropriate material.”

Potential Impact	Education Scotland Response
<ol style="list-style-type: none"> <li>1. Learners could experience bullying or distress as a result of sharing personal information.</li> <li>2. Learners could be identified and located by someone who would wish to do them harm.</li> <li>3. Stakeholders acknowledged that there may be a greater likelihood of inappropriate content and behaviour following the introduction of organisational social networking service Yammer.</li> </ol>	<ol style="list-style-type: none"> <li>1. Glow Community Rules have been produced for learners and teachers, supporting them to use Glow in a safe and positive manner.</li> <li>2. In Glow Meet, learners are unable to set up a meeting but can access sessions as a participant.</li> <li>3. The ‘Report a Concern’ function allows users to report inappropriate content quickly.</li> <li>4. Yammer has a keyword monitoring facility that generates alerts whenever a list of inappropriate or worrying words/phrases are used.</li> <li>5. O365 and G Suite content is preserved for audit purposes and can be accessed to support any investigation.</li> </ol>
Remaining Risk	
<b>Medium</b>	Children may still share personal or inappropriate content on Glow, however, the steps identified will significantly reduce both the likelihood and impact of this occurring.

### 6.3 “Unauthorised individuals may gain access to the personal information held on Glow.”

Potential Impact		Education Scotland Response
<ol style="list-style-type: none"> <li>1. Publication of personal data, causing distress to individuals.</li> <li>2. Potential breach of legal obligations as defined under the Data Protection Act 1998, should insufficient technical or organisational steps be taken to protect personal information.</li> <li>3. Learners could be identified and located by someone who would wish to do them harm.</li> </ol>		<ol style="list-style-type: none"> <li>1. Education Scotland regularly carry out IT Security Assessments or audits on Glow services.</li> <li>2. An Information Security Policy has been developed describing steps being taken by Education Scotland.</li> <li>3. Guidance has been produced for account creation, as well as guidance on the proportionate vetting of all those who are given guest/partner access to the service.</li> <li>4. An age-appropriate Glow password policy has been implemented.</li> <li>5. Measures have been taken so that only administrators of a Glow Blog can see learners email address.</li> <li>6. Guidance has been published for Glow Customers outlining the sharing options available and stating that care should be taken not to share links more widely than necessary.</li> </ol>
Remaining Risk		
<b>Low/Medium</b>	The steps being taken will significantly reduce the potential for this issue to arise. However, because the main user base is aged between 5 and 18, it is fair to assume that the inappropriate sharing of usernames and passwords is more likely in respect of Glow than it would be for other services.	

### 6.4 “Too much personal information may be displayed in Glow automatically by the service provider.”

Potential Impact		Education Scotland Response
<ol style="list-style-type: none"> <li>1. Learners could be identified and located by someone who would wish to do them harm.</li> <li>2. There is also a risk of a potential breach of legal obligations should personal information remain on the system for longer than necessary.</li> </ol>		<ol style="list-style-type: none"> <li>1. Education Scotland has consulted and reviewed the ability for pupils to search and contact any other Glow user, however, it has been decided by various stakeholder groups that the educational benefit of this functionality outweighs the risk</li> <li>2. A service opt-out process is available to allow schools to identify any user that is not to have a Glow account created through choice or vulnerability.</li> <li>3. Measures have been taken so that only administrators of a Glow Blog can see learners email address, first name and last name.</li> <li>4. The display name of learners on a Glow Blog or within Yammer can be changed if they are required to be protected.</li> </ol>

	5. The amount and type of personal information included in Glow automatically has been kept to a minimum. No sensitive personal information is automatically included.
<b>Remaining Risk</b>	
<b>Low/Medium</b>	Steps have been taken to significantly reduce the risks associated with the inclusion of personal information about children in Glow. In order to minimise this risk, there remains an obligation on users to follow the guidance provided.

### 6.5 “Learners personal information may be used to create a Glow account without parental consent.”

Potential Impact	Education Scotland Response
1. Potential breach of legal obligations as defined under the Data Protection Act 1998.	1. Controls are in place that allows learning establishments or Local Authorities to opt an individual user out of Glow if a parent so wishes. This leads to the removal of their existing Glow account or non-creation of a new Glow account, as appropriate. 2. Local authorities have signed the Glow Agreement where they have agreed to ensure processes are in place to gain the consent of parents if deemed necessary before Glow accounts are created, and to communicate clearly how and why personal information is used to create and manage Glow accounts.
<b>Remaining Risk</b>	
<b>Low</b>	This issue could only occur if a local authority or school were to pass information to Glow in error. Local processes should prevent this from occurring.

### 6.6 “Vulnerable children may be identifiable by peers and others by virtue of the fact that they do not have access to Glow.”

Potential Impact	Education Scotland Response
1. Distress to learners and/or parents. 2. Vulnerable children would be prevented accessing opportunities available to their peers through Glow, placing them at a disadvantage.	1. Glow is designed to be available to all learners – subject to the consent of their parents if deemed necessary and the Local Authority. 2. A child protection review is undertaken on new Glow functionality when required by the Scottish Government Child Protection team or Education Scotland Safeguarding experts.
<b>Remaining Risk</b>	
<b>Low</b>	This issue is only likely to arise if a local authority were to choose to apply an alternative policy that excluded vulnerable children in the area from Glow access.



# 7. Next Steps

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## Education Scotland's commitment

The Glow service will constantly evolve, helping to ensure that Scotland's learners have access to the most up-to-date digital tools to enhance the learning experience. This DPIA will be refreshed and updated when there is any major change to any of services that currently make up Glow, or when any new service(s) are added. This will ensure that privacy impacts continue to be fully understood and mitigations are in place as appropriate.

# Annex 1 – Authentication

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Authentication services within Glow are provided by a third party provider called RM Education via RM Unify. Glow authentication is “Single Sign On” which allows Glow users to connect to several different online services using a single set of credentials.

## **Provisioning**

Most schools in Glow have their user data fed directly from SEEMiS while other organisations such as Education Scotland and independent schools use .csv file uploads to manage user accounts.

## **Launch Pad**

Teachers and learners log in to Glow where they are presented with a customised ‘Launch Pad’ unique to their organisation which allows access to available services such as Education Scotland and SQA. Users also have access to a shared national Launch Pad and can customise their own Launch Pad from the services available. Users can enter a personal email address for use in resetting their Glow password.

## **Authentication**

Whenever a teacher or learner wishes to access a Glow service such as O365 or Blogs, Glow Authentication takes the original set of credentials supplied by the user to allow them access to other services without entering their credentials again.

# Annex 2 - Microsoft Office 365

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For the purposes of Glow, Microsoft Office 365 has been configured to deliver the following key services:

- Office Online (Word, Excel, PowerPoint) & Office 365 ProPlus
- OneNote (including Class Notebook and Staff Notebook)
- Outlook Email
- OneDrive for Business
- Teams for Education
- Yammer
- Sway
- O365 Video
- Forms
- Delve
- SharePoint
- Planner

## **Office Online (Word, Excel, PowerPoint) & Office 365 ProPlus**

Teachers and learners can create and edit Word documents, Excel spreadsheets and PowerPoint presentations in Microsoft Office Online. They can work privately or can collaborate on the same file according to permissions set by the owner.

Office 365 ProPlus allows all Glow users to download and install 5 copies of the current desktop/tablet/mobile versions of Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, Skype for Business and OneDrive for Business.

## **OneNote (including Class Notebook and Staff Notebook)**

All Glow users have access to OneNote which is a free-form information gathering and multi-user collaboration tool – a bit like a digital jotter. Teachers can create Class Notebooks that provide a shared content library, collaboration space and private area for each pupil to work with input from the teacher.

## **Outlook Email (Email, People, Calendar, Tasks)**

All Glow users have their own email account. They can send and receive email to and from other Glow users, or any other external email address. They can attach files and include images and links. They can use People to find other Glow users across Scotland and can set up email distribution groups. All users have a calendar, allowing them to organise appointments and events. A list of Tasks can also be created.

## **OneDrive for Business**

All Glow users have a private storage space that can be used to store and view Office files, pictures, videos, PDFs, Visio diagrams or any other allowed file types. Documents stored in the personal storage space can be shared with any other Glow user or with non-Glow users, should a user choose to share documents externally.

## **Teams for Education (Class Teams & School Data Sync)**

Teams is a digital hub that can bring together dynamic conversation, files, Notebook, online meetings, Planner, a website and apps together in one place. Educators can create collaborative classrooms and set assignments in Class Teams, connect in professional learning communities, and collaborate and communicate with school staff. Class Teams are created automatically by School Data Sync to mirror the membership of classes in a school and give teachers and pupils a digital classroom to supplement their learning which can be accessed in and out of school.

### **Yammer**

Yammer is akin to a social network within Glow. Any Glow users who wish to, can join and have their name, school, role (teacher or pupil), and email address populated into their Yammer profile. Each user can create groups – both open to all Glow users, and private to selected teacher or pupil users. In Yammer groups, users can post questions, updates or information, which are then visible to other group members. Users can also engage in private messaging from one user to one or more others. Teachers and pupils use Yammer for class discussion, school improvement conversations, professional learning, curricular and topic groups, teacher/pupil private conversations, as well as a degree of social interaction. A Keyword Monitoring service is in place to monitor, alert and respond to inappropriate content.

### **Sway**

All Glow Users have access to Sway which makes it easy to create and share interactive reports, personal stories and presentations that look great on mobile devices as well as on tablets and desktops. Sways can be created from scratch or from imported Word/PDF files or from a topic and internet search. Finished Sways can be shared with other Glow users or with non-Glow users using a link to the content.

### **O365 Video**

Teachers and staff in Glow can create video channels to store and play educational videos. Channel creators can adjust permissions to control who can view/contribute/control content but content cannot be made visible to non-Glow users. Channels can be linked to Yammer groups so that educational conversation can take place directly linked to the videos.

### **Forms**

All Glow users can create Forms which can be surveys or quizzes. Surveys obtain valuable information from respondents while quizzes can be imbued with correct/incorrect answers and can facilitate automatic marking or direction to further revision questions. Forms can be shared with Glow users or non-Glow users such as parents or prospective employers by link.

### **Delve**

Delve is like a smart search engine within O365 and presents personally relevant results to users based on their previous activity inside the service. Users can search for content, create and follow 'boards' which curate content on a common area of interest. They can view user profiles and see activity of other users that has been shared with them. Delve can be used by pupils to find revision material or keep up to speed with activity from members of a study group, or by teachers working together in a cross-school professional learning group to gather together teaching notes from disparate sources.

### **SharePoint**

Each school has a website with file storage that it controls in terms of functionality, presentation, content and permissions. Where an administrator has configured this, some content can be made available to Glow users from other schools or non-Glow users.

Users can also create and maintain their own separate website. Users can upload, embed and use different media content, such as documents, photos and videos, across all sites where they are granted permission.

### **Planner**

Planner is a stand-alone service but also part of every Class Team. It allows teachers and learners to break down complex projects or outcomes down into a set of tasks that can be grouped together, assigned to individuals, discussed, tracked and managed. Teachers could use this to plan learning delivery over an academic year, pupils could use this to organise group projects or exam preparation and schools could use it to plan school events.

# Annex 3 – Glow Blogs

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For the purposes of Glow, WordPress Blogs has been configured to deliver the following key services:

## **Blog Creation and Maintenance**

Users who are logged into Glow are able to create new blogs and edit them if they have the right permissions to the blog. Blog administrators are able to set three privacy levels for a blog:

- Private – Users, who have logged into Glow and have been assigned a role in the blog, can access the blog. If users are not logged in, they will be redirected to the login page and then returned to the blog if authentication is successful.
- Public – Anyone can access the blog. Only teachers and non-teaching staff can make a blog public.
- Glow Only – Users who have logged into Glow can access the blog. If users are not logged in, they will be redirected to the login page and then returned to the blog if authentication is successful.

## **Blog Sharing**

Users can share blogs with other users in Glow and assign them specific roles that will enable them to perform different functions within the blog. These roles are:

- Administrator – somebody who has access to all the administration features within a single blog.
- Editor – somebody who can publish and manage posts including the posts of other users.
- Author – somebody who can publish and manage their own posts.
- Contributor – somebody who can write and manage their own posts but cannot publish them.
- Subscriber – somebody who can only manage their profile.

## **Posting to Blogs and Commenting on Blogs**

Users can add and edit posts on blogs to which they have access when they are logged in. Users are able to upload, embed and use different types of media content, such as photo and video, across the blogs. Users can comment on blogs only under their Glow identity when logged into Glow. For public blogs, non-logged in users can comment on blog posts using another ID (name, other email address, website etc.)

## **Plugins**

Core WordPress functionality can be enhanced by activating available plugins on a blog by blog basis. Also, it is possible to activate plugins, if required, across all instances by deploying them across the service.

## **RSS feed**

Users can share public blogs data using public RSS feeds with support for the following current versions of RSS: RSS 0.92, RSS 1.0, RSS 2.0 and Atom 1.0.

## Annex 4 – Glow Meet

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For the purposes of Glow, Skype for Business in O365 has been configured to deliver the Glow Meet service, which provides the following key functionality:

### Online Meeting Creation

The service allows teachers and educational partner organisations to create online meetings (web conferences). These meetings serve a number of purposes, broadly described as:

- Supporting professional development opportunities for staff
- Delivering learning opportunities for pupils with subjects or topics delivered online. This could extend opportunities across schools if this wasn't available in their location e.g. Higher Music supported via Skype
- Collaboration across classrooms
- Enabling better collaboration for group projects and extracurricular activities
- Interview with an expert: bring in outside perspective with someone experienced in a topic or area to support what you are learning
- National collaboration opportunities with partner organisations e.g. Glow Meet in partnership with the Scottish Space School with NASA astronauts and engineers for establishments from across Scotland.

Please note that students cannot initiate their own web conferences, but can attend Glow meetings as a Guest.

Meetings can be set up in a number of ways depending on the purpose.

### Online Event Hosting

- The service allows users to create and host large online events up to 250 attendees signed in.
- Depending on how the meeting is set up users can select the privacy level for a meeting or event, such as who can present and who has cameras and microphones switched on.
- Meeting invites can be issued to both Glow and non-Glow users.

### Streaming and Real Time Conversation

- The service allows for multichannel, real-time streaming of audio & video as part of the meeting.
- Real time conversation, screen sharing and Q&A within meetings is possible within the service.

# Annex 5 – G Suite

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For the purposes of Glow, G Suite for Education has been configured to deliver the following key services:

- Google Classroom
- Google Drive
- Google Docs
- Google Hangouts
- Google Calendar
- Google Sites
- Google Vaults

## **Google Classroom**

Classroom allows teachers and learners to work collaboratively. Educators can create classes, distribute assignments and provide instant feedback for their students. It integrates with other approved Google tools and allows teachers to track and monitor pupils progress. Classrooms can be shared with other whitelisted G Suite tenancies.

## **Google Drive**

Google Drive is personal cloud storage service where users can store data and synchronise their content across different devices. Content can be shared with other Glow users.

## **Google Docs, Sheets, Slides and Forms**

Teachers and learners can create and edit Docs, Sheets, Slides and Forms online and work collaboratively with other Glow users. Changes are saved automatically into the Drive.

## **Google Hangouts**

Hangouts is a communication tools that includes messaging, video and chat. Participants can have one-to-one or group calls. Hangouts has only been enabled for staff.

## **Google Calendar**

Calendar is enabled for all users to create and edit events online. Other users will be able to see user's availability only.

## **Google Sites**

Sites is a web page creation tool that is part of the G Suite productivity suite. Sites is enabled for all users to be able to create team-orientated sites where multiple users can collaborate and share files. Sites can only be shared with other whitelisted G Suite tenancies.

## **Google Vaults**

Vaults is an archiving service for G Suite users. It lets you retain, hold, search and export data. It is entirely web-based and is included as part of the G Suite for Education suite of tools.

## Annex 6 – Stakeholders

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The following groups were part of the original consultation carried out by the Glow programme in 2014. Some of these groups no longer operate, but the appropriate live groups are consulted where appropriate:

1. The Scottish Government child protection team.
2. The Information Security Officer for Glow.
3. The Scottish Stakeholder Group for Child Internet Safety: a multi-agency working group tasked with overseeing Scotland's approach to child internet safety.
4. Glow Key Contacts: contacts from each local authority across Scotland who have oversight of the arrangements for accessing and using Glow in their area.
5. The ICT in Learning Technical Operational Advisory Group: An expert group consisting of local authority ICT officials (corporate and education), local authority information security officers and Scottish Government representatives.
6. Glow Product Owners: A small group of seconded teachers based within the Glow programme to offer a practitioner perspective on the services being procured/delivered.
7. 493 children and young people aged between 6 and 18 who offered their views in 2014 through a number of mediums including a national survey, exploration workshops and interviews where children met with interviewers either on a one-to-one basis or in pairs.
8. 16 teachers and 10 parents from a mix of primary and secondary schools and rural and urban schools, who shared views and perspectives in 2014 via detailed face-to-face interviews with social researchers.
9. Those local authorities who participated in the Digital Learning Risk Appetite Evaluation exercise conducted by the Scottish Government in late 2014.
10. Scottish Local Authority Information Security Group: a group of information security representatives from local authorities sharing expertise, knowledge and experience of common information security issues from a technical and data protection perspective.

The following reports were prepared to conclude the 2014 consultation:

- Young Scot - <https://glowconnect.files.wordpress.com/2015/02/glow-pia-young-scot-report.pdf>
- Children's Parliament - (<https://glowconnect.files.wordpress.com/2015/02/cp-children-and-technology-report-2014.pdf>) on behalf of the Scottish Government to engage children and young people in the development of the PIA.
- Reid-Howie Associates on behalf of parents and teachers - <https://glowconnect.files.wordpress.com/2015/06/digital-learning-and-teaching-programme-qualitative-research-into-the-views-of-parents-and-teachers-on-online-privacy-within-glow.pdf>)