

Fit for Purpose ICT Infrastructure for Post-Primary Schools

ACCS Schools

8th Feb 2017, Mullingar

Tom Lonergan

National Coordinator - Technology Integration

PDST Technology in Education

- **Wider Learning Context**
- **ICT Infrastructure**
- **Approach to improving infrastructure**
- **Fit for purpose Technologies**
- **PDST TiE Advice and Supports available to schools**
- **Other related areas, questions**

[Home](#)[Training](#)[Technology](#)[Planning](#)[Good Practice](#)

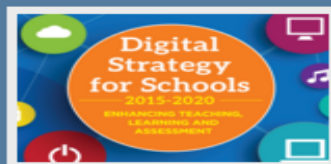
Grant Information

[Purchasing Frameworks](#)[Technology Overview](#)[Computing Devices/ Tablets](#)[Networking/ Wireless Networks](#)[Cloud based Tools and Applications](#)[Presenting in the Classroom](#)[Other ICT in the Classroom](#)[Schools Broadband](#)[Webhosting/Blogs](#)[Technical Support](#)[Other ICT related areas](#)

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ICT infrastructure grants for primary and post-primary schools - Jan 2017



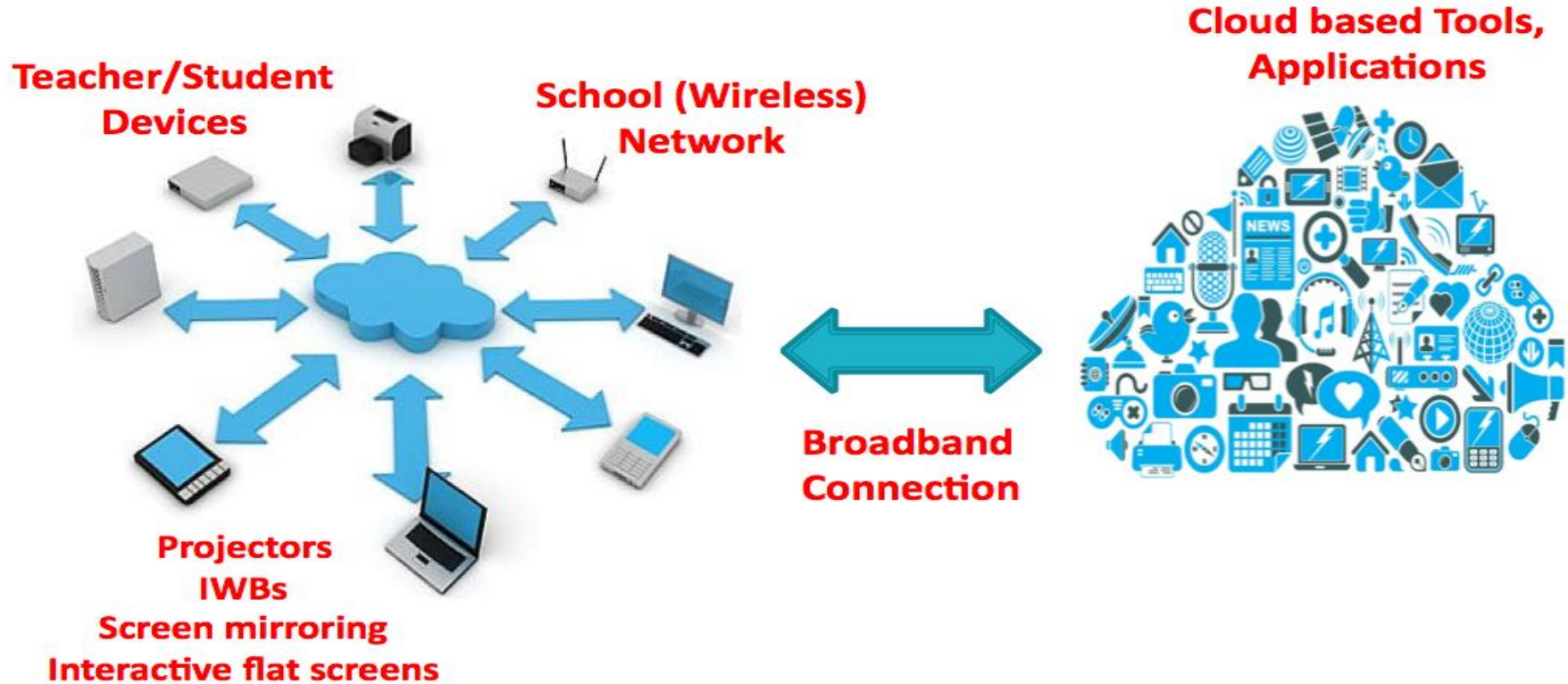
The Minister for Education and Skills, Richard Bruton T.D., has announced an investment of €30m in ICT infrastructure grants for primary and post-primary schools.

The Minister for Education and Skills, Richard Bruton T.D., has announced an investment of €30m in ICT infrastructure grants for primary and post-primary schools. Today's investment marks the start of the implementation of the government's €210 Million Digital Strategy for Schools. The funding will support the development and implementation of an eLearning Plan for each school to embed ICT in teaching and learning.

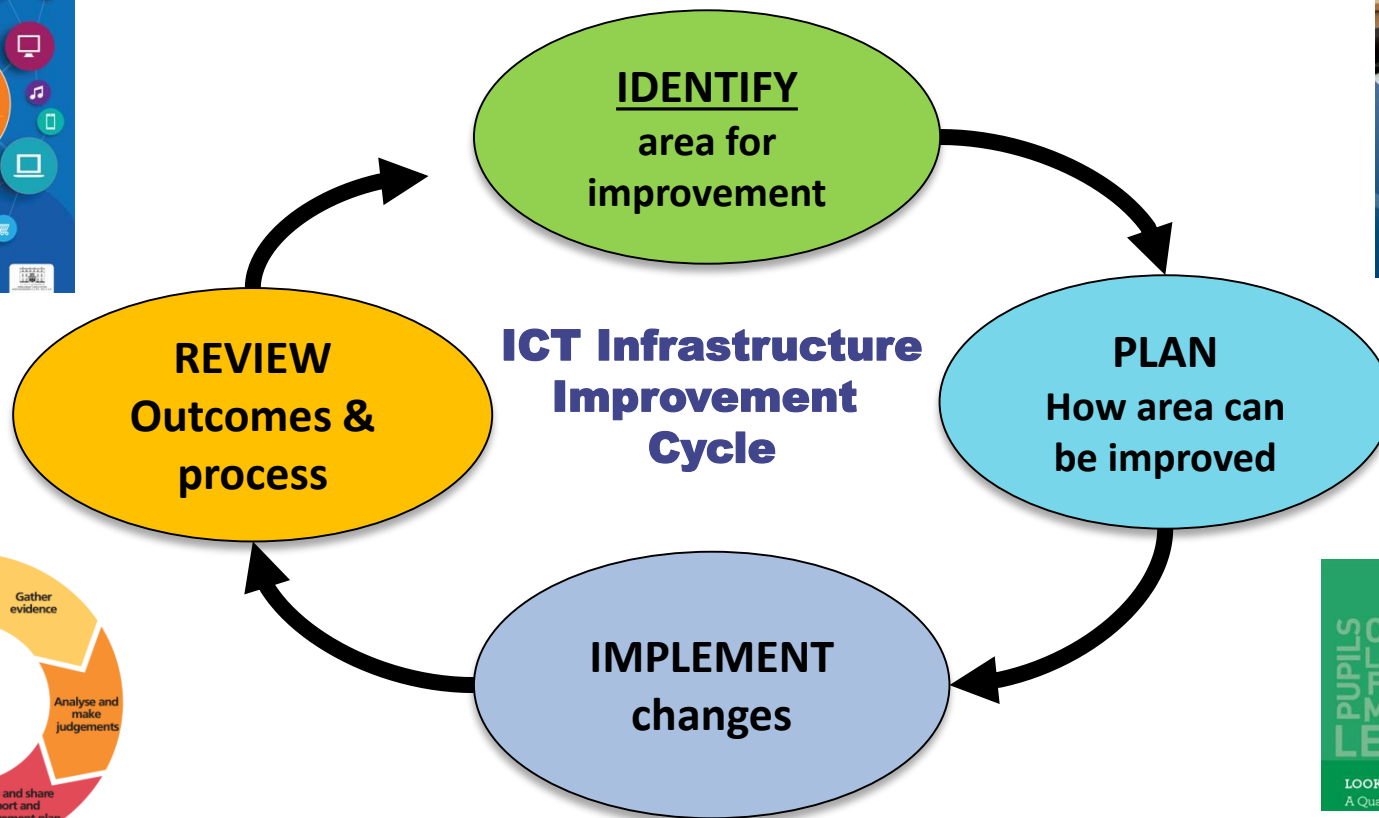
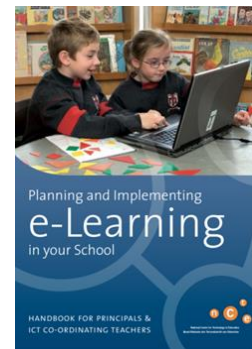
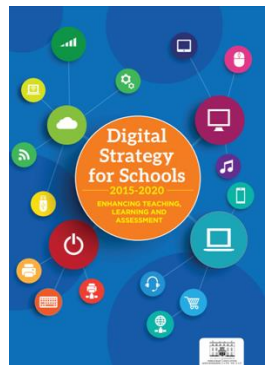
[ICT Grants for Schools - Jan 2017.pdf \(size 431 KB\)](#)

The link to the circular is: www.education.ie/en/Circulars-and-Forms/Active-Circulars/ci0001_2017.pdf
The link to the Press Release is www.education.ie/en/Press-Events/Press-Releases/2017-Press-Releases/PR2017-03-01.html

Schools ICT Infrastructure



Approach - Improving ICT Infrastructure



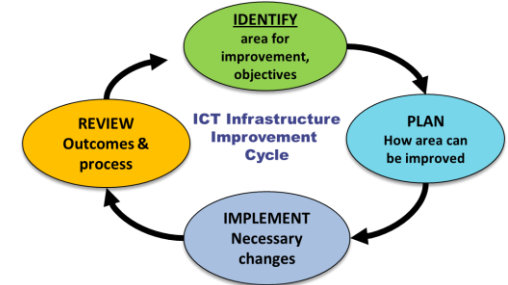
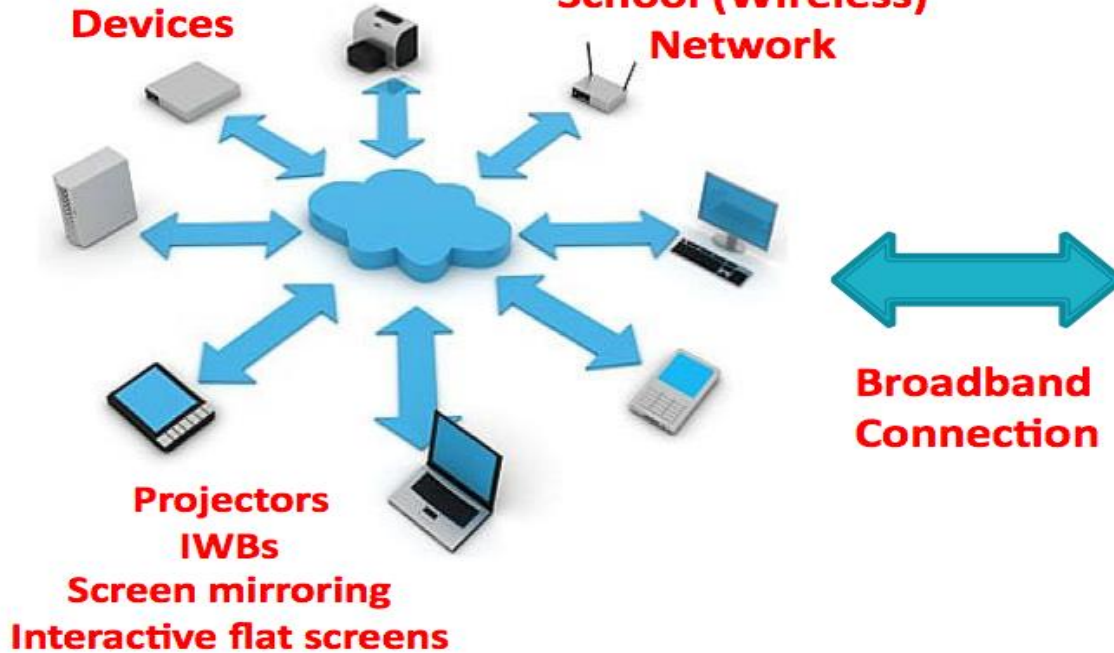
Quality Framework

Schools ICT Infrastructure

**Teacher/Student
Devices**

**School (Wireless)
Network**

**Cloud based Tools,
Applications**

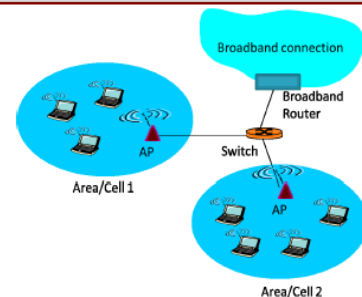


New Networking Guidelines for PP Schools

- Provided by DES Building Unit with input from PDST-TiE and other parties
- Particularly relevant for new builds
- Also relevant to upgrades, extensions
- Incorporates wifi into the building fabric
- Provides cabling for wifi access points (APs) in each classroom / learning space
- Document available from:

www.pdsttechnologyineducation.ie/en/Technology/Networking-Wireless-Networks/

DEPARTMENT OF EDUCATION AND SKILLS



**GUIDANCE DOCUMENT FOR THE PROVISION
OF
WIRELESS NETWORK INSTALLATIONS
IN
POST PRIMARY SCHOOLS.**

(FIRST EDITION MAY 2016)

Planning & Building Unit
Department of
Education and Skills
Tullamore, Co. Offaly.
Telephone: (057) 9324300
Fax: (057) 9351119

Web: <http://www.education.ie>
www.energynineducation.ie

Trends/Shifts in Technology use

Computing Devices:

- Desktops > Laptops > Trolleys, Tablets, Hybrids, phones
- School shared devices > personal devices, BYOD
- **Device Funding:** School funded > parent funded



Presenting in the Classroom:

- Projectors, Long, Short, Interactive, HD, **Interactive Flat Screens**
- **Present from anywhere**



School Network: Fixed > Wifi

Server: Local Server > Cloud 'Server',

Broadband: Fast, reliable



100Mbit/s High Speed Broadband

- Schools Broadband **Service Desk**
 - 1800 33 44 66
 - Email: broadbandservicedesk@pdst.ie
- Critical **link to cloud-based services**
 - Faster, multi-user, reliable
- Content Filtering enhancements
 - **Two levels (eg. staff and student)**
- Integrated Firewall
 - **Filtering of malware, viruses**
- **Remote Technical Support** via Broadband connection
- **Recent ESRI Report**



Image: <http://businessetc.thejournal.ie/comreg-official-online-speed-test-908593-May2013/>

Teaching and Learning in
Second- Level Schools at
the Advent of High-Speed
Broadband

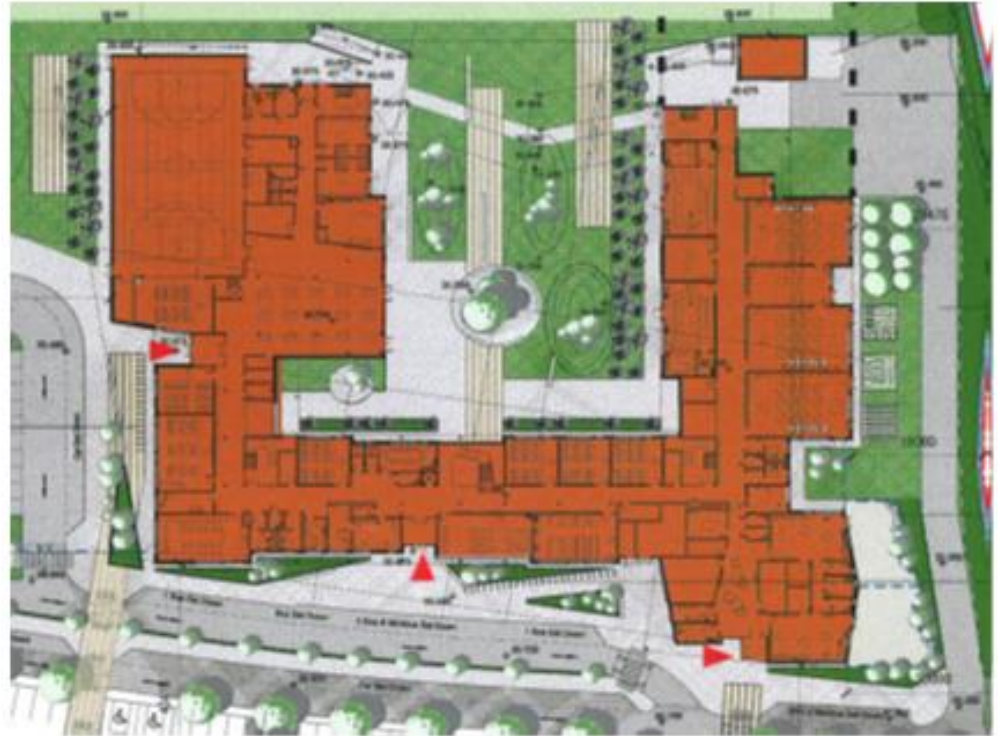
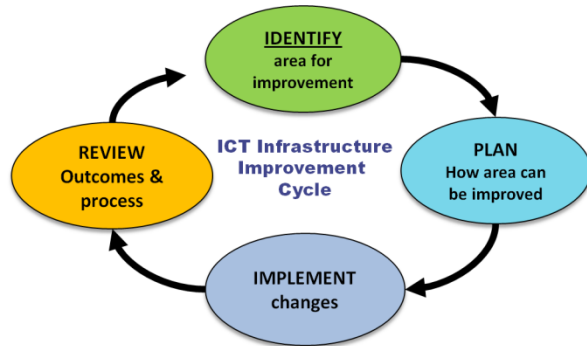
Selina McCoy, Seán Lyons, Bryan Coyne and
Merike Darmody

Wireless Framework Fundamentals

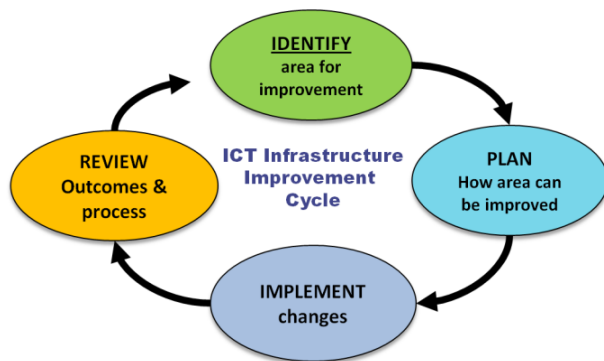
- Schools – the **most demanding environment** for wireless
- Along with the broadband connection the School wireless is becoming the **single most critical aspect of ICT in a school**
- Must be **fit-for-purpose**, and **future proofed**
- Importance of relevant post primary school '**Reference Customers**'
- Providers must have **demonstrated wireless expertise**
- Must meet **all** RFT technical and related requirements
- **Ongoing support** is essential

Wireless - Planning Considerations

- **Each school is different**
- **New / Existing Schools**
- **Size, building layout**
- **New Wireless Framework**
 - 7 approved suppliers
- **Phased approach** possible



ICT Infrastructure – Decisions



**Combinations
of different
Technologies**

**New
builds &
extensions**

**ICT
Procurement,
Frameworks**

Decisions on:

- Teacher/Student devices
- Networking/Wifi, Servers
- Presenting in the classroom
- Cloud based applications
- Learning platforms
- Technical support

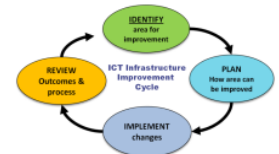
Example 1 – Improving the Network

Objective

- To improve the network – faster, more reliable & requiring less tech support

Minimum Recommended Standard

- A planned and managed network. Data traffic segregated using VLAN's.
 - 1Gbit/sec, Cat 6a for all new cabling, Upgrade switches to 1Gbit/sec
 - All equipment & cables to be labelled.
 - Network diagram to be provided and kept up to date
 - A cable management system, add rack shelves
 - A Layer 3 fully managed core switch
 - Rackmount UPS for safe shutdown of critical ICT equipment
 - Power over Ethernet (PoE) access switches required for wifi.
-
- For more details refer to PDST-TiE Networking Recommendations.



Example 2 –Improving School Wifi

Problem

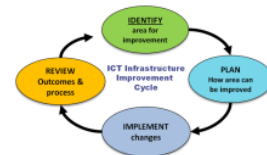
- Reliability problems with existing wifi, drops, staff dissatisfaction

Objective

- Resolve issues either by fixing the problem, or by installing fit for purpose wifi

Approach

- Issue an RFT for wifi using Wifi procurement framework
- Evaluate responses
- Decide on implementation model (eg., phased or whole school approach)
- Select a provider and implement



Example 3 – Moving from Server to Cloud

Problem

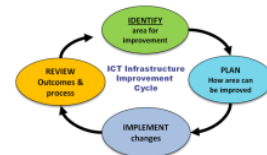
- Reliability problems with existing server storage, Cost of

Objective

- Cost Saving, Reduce Technical Support, Flexibility

Approach

- Identify and area for improvement – eg File Storage
- Review available services (eg Dropbox, G-Suite-Google, Microsoft 365)
- Run a trial to test if the cloud based application is fit for purpose
- Implement



Example 4 – Student devices

Problem

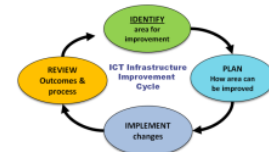
- Lack of student access to devices for active learning

Objective

- To facilitate student devices for learning – BYOD, 1:1, hybrids.

Approach

- Review with stakeholders
- Decide on approach and device strategy that best fits schools needs
- Contact suppliers to review available services
- Issue RFT, Evaluate
- Implement



Why use ICT Procurement Frameworks?

- Presented in **non-technical language, practical and useful**
- Schools can **specify any device they require**, including a 'standard' spec' or have **flexibility to include their own specific requirements**
- **Practical example templates are provided** which can be modified by schools to suit their needs
- **Standard framework contractual T&Cs are already in place** with suppliers
- **Good Warranty - 3 year next business day (NBD) onsite**

Existing ICT Frameworks

- Desktop PCs, Notebooks /Laptops
- Digital Projectors
- Wireless (Wifi) Networks
- Apple (iPads, Macs, iMac etc.,)
- Chromebooks, Android Tablets
- T4/DCG PCs and Notebooks for CAD



Proposed New Framework (Target – by June 2017)

- Projectors, Interactive Flat Screens, Visualisers

Other Procurement options

- **If better value for money can be achieved from non-Framework vendors,** schools should seek concurrent quotes from both framework and other suppliers

Notebook Framework

	DATAPAC	DELL	FUJITSU	HP INC	PC PERIPHERALS	PFH TECHNOLOGY
Standard Notebooks – Specification & Maximum Pricing						
Model	Hewlett Packard Elitebook 745	Dell Latitude E5450	LifeBook E546 non vPro 14" Notebook	HP ProBook 645	Toshiba Satellite Pro A50-C-1FC Notebook	Lenovo ThinkPad L450
Operating System	Microsoft Windows 10 PRO preinstalled	Windows 8 PRO 64 preinstalled	Microsoft Windows 10 PRO preinstalled	Microsoft Windows 10 PRO preinstalled	Microsoft Windows 10 PRO preinstalled	Microsoft Windows 10 PRO preinstalled
Processor	AMD A8 PRO-7150B 1.9 GHz Quad Core Processor	Celeron 3755U Dual Core Processor	Intel Core i3-6100 Dual Core Processor	AMD Elite A4-5150M APU Dual Core Processor	Intel Core i3 5005U Dual Core Processor	Intel Core i3-500U Dual Core Processor
Battery Life	Up to 540 minutes	Up to 580 minutes	Up to 720 minutes	Up to 540 minutes	Up to 490 minutes	Up to 640 minutes
RAM	8GB	8GB	8GB	8GB	8GB	8GB
Storage	500 GB 7200 RPM	500 GB 7200 RPM	500 GB SATA 7200RPM	500 GB 7200 RPM	500 GB SATA 7200RPM	500 GB 7200 RPM
Weight (Incl. Battery)	1.7 kg	1.8 kg	1.9 kg	2.1 kg	2.2 kg	2.0 kg
Screen Size	14"	14"	14"	14.1"	15.6"	14"
Warranty	3 Years NBD on-site, full parts and labour cover	3 Years NBD on-site, full parts and labour cover	3 Years NBD on-site, full parts and labour cover	3 Years NBD on-site, full parts and labour cover	3 Years NBD on-site, full parts and labour cover	3 Years NBD on-site, full parts and labour cover
Maximum Price (ex-VAT)	€581.95	€599.00	€652.00	€506.00	€489.00	€557.00

PC Framework

	<u>DATAPAC</u>	<u>DELL</u>	<u>FUJITSU</u>	<u>HP INC</u>	<u>PC PERIPHERALS</u>	<u>PFH TECHNOLOGY</u>
Standard Personal Computers – Specification & Maximum Pricing						
Model	Hewlett Packard Prodesk 400 G2.5 SFF	Dell Optiplex 3020 SFF	Fujitsu Esprimo D556 SFF	HP 705 G2 Elitebook SFF	Celtic G4400 Series	Lenovo ThinkCentre E73 SFF
Chassis Type	Small Form Factor	Small Form Factor	Small Form Factor	Small Form Factor	Mini Tower	Small Form Factor
Processor	Intel Celeron G1850 Dual Core Processor	Intel Pentium G3250 Dual Core Processor	Intel Core i3-6100 Dual Core Processor	A4-8350 Dual Core	Intel Pentium G4400 Dual Core Processor	Intel Pentium G3240 Dual Core Processor
RAM	8GB	8GB	8GB	8GB	8GB	8GB
On-Board Storage Capacity	500 GB 7200RPM SATA 6G 3.5 HDD	500 GB 7200RPM Hard Drive	1TB SSHDD SATA III 3.5' SSD, Hybrid Drive with 8GB and Flash (SSD) and 7200RPM	500GB 7200RPM	500 GB 7200RPM as standard	500 GB Hard Drive, 7200 RPM, 3.5", SATA III as standard.
Monitor	20" LED Widescreen monitor – height and tilt adjustable as standard.	21" flat screen, height and tilt adjustable monitor.	21.5" LED Widescreen monitor – height and tilt adjustable as standard.	HP 20" E201 Elite Display.	21.5" supplied as standard	21.5" TFT Flat screen, height and tilt adjustable.
Warranty	3 Years Next Business Day on-site, full parts and labour cover included as standard.	3 Years Next Business Day on-site, full parts and labour cover included as standard.	3 Years Next Business Day on-site, full parts and labour cover included as standard.	3 Years Next Business Day on-site, full parts and labour cover included as standard.	3 Years Next Business Day on-site, full parts and labour cover included as standard.	3 Years Next Business Day on-site, full parts and labour cover included as standard.
Maximum Price (ex-VAT)	€471.75	€525.00	€559.00	€473.39	€475.00	€474.00

Template Notebook RFQ email to suppliers

Dear Supplier, Please quote for [X] **Notebooks** of the spec below as per the (OGP) Framework.

Operating System – Microsoft Windows 10 Professional (64 bit); A high quality **mid-range multicore processor**
Minimum 8GB memory (RAM) ; Minimum 500GB storage (ie., Disk Drive)

Notebooks **Screen Size** should be approx. **[14 Inch or 15.6 Inch]**

Integrated CD/DVD drive or external CD/DVD drive connected via USB

Long **battery life, (6 hours minimum)**.

3 year next business day onsite **warranty**; Suitable protective carry bag to be included

Additional Products and Services/Options: *(Include some or all of these as required)*

Units to be delivered, and connected to network, All packaging to be removed.

Quote for Microsoft Office Professional (latest version); Also quote for Office 365

Options: Spare battery and / or power cable to be included for Notebooks, so that one can be left in school, and the other remain at home.

The **Closing Date for Supplier Responses** is 5pm on *[Insert date here, give 5 working days to respond]*.

Award Criteria:

Contracts **must be awarded on the basis of the following 6 Award Criteria:**

Cost - 60%;

Quality of technical support - 10%;

Delivery Timescales: 0%;

Quality of proposed device - 20%







Quality of associated services - 10%

Energy efficiency & environmental matters – 0%

Digital Projector Framework

Short Throw and Ultra-Short Throw Digital Projectors: Suppliers and Product Details

The following suppliers and products have qualified to be on the Framework. Product and installation details are provided here.

Suppliers	DCB	Dell	Image Supply Systems	Imex Instruments	Meritec	Promethean
Product Manufacturer	3M	EPSON	NEC	Sanyo	Hitachi	Promethean
Projector Model No.	SCP716	EB-440W	NP610S EDU	DWL2500	ED-A100	PRM-30
Ultra-short/short throw	Short Throw	Ultra-Short Throw	Short Throw	Ultra-Short Throw	Ultra-Short Throw	Short Throw
Max' Lumens setting	2400	2000	2600	2000	2000	2000
Image of Digital Projector						
Min image Resolution	XGA	XGA	XGA	XGA	XGA	XGA
Min 3 Year Warranty	Yes	Yes	Yes	Yes	Yes	Yes
Faulty lamp unit replaced free under warranty	Yes	Yes	Yes	Yes	Yes	Yes
Projector unit cost (Ceiling Price **)	1013	785	720	1,111	968	778
Projector delivery cost (may be less for higher quantities)	18.15	12.1	0	12.1	18.15	24.2
Projector mounting kit	231	122	218	242	136	105
Projector Cost + mounting kit (without installation)	<u>€1,262</u>	<u>€919</u>	<u>€938</u>	<u>€1,291</u>	<u>€1,122</u>	<u>€907</u>
Installation cost (Ceiling Price **)	312	329	363	170	397	204
Projector + Installation Cost (Ceiling Price **)	<u>€1,556</u>	<u>€1,236</u>	<u>€1,301</u>	<u>€1,461</u>	<u>€1,501</u>	<u>€1,087</u>
Spare Lamp unit cost	198	211	446	351	290	173

Note 1: Prices are inclusive of Projector, 3 Year warranty (Next Business Day onsite (ie in the school) including parts and labour cover and including lamp unit replacement if it fails during warranty). Stated prices in the table include VAT. Some cables may be charged as an additional cost.

Template Projectors RFQ email to Suppliers

To:	shortthrowprojector@pdst.ie
Subject:	Request For Quote (Short Throw Projector for schools)

Dear Supplier,

Projectors: Please quote for *[insert quantity]* short throw (or ultra-short throw) projectors as per the projector framework.
Mounting Kit: Please also quote for *[insert quantity]* mounting kits.
Installation: Please quote separately for the option for installation of the projectors
a) Please quote for installation within normal business hours eg. 9-30am - 6pm Monday to Friday and
b) Please also quote for installation outside of normal school hours (after 4pm, evenings, weekends etc)

School specific requirements: *(Schools should add or delete text here as required)*

Cabling requirements: A suitable wall plate connector to support video and audio connectivity is required.

Power, VGA and audio cables should be supplied; Cabling needs to be of a high standard. PVC trunking is required to protect cables.

Associated Products: *(Schools should add or delete text here as required)*

Please quote for the following associated products:

- A) A pair of suitable wall mounted classroom speakers (including built in amplifier)
- B) A good quality projection screen
- C) A security lock and cable to secure the projector.

The **Closing date** for valid quotes to be received is *[Insert a date 5 working days from when RFQ is issued]*

Award Criteria: Any contracts arising from this RFQ will be awarded on the basis of the following Award Criteria: (or those listed on page 4)

Overall Cost [80%] of Projector, Delivery, Mounting Kit and Installation, *(as required)*

Special requirements [20%]: This includes the quality and clarity of the RFQ response, installation to a high quality, supplier responsiveness, product availability and lead time to install, demonstration of projector functionality to a staff member, equipment labeling (for identification/support), customer satisfaction signoff form. *(add or delete text here as required)*

The anticipated contract award date is *[Insert date]*

Provide contact name, School Name and Address, School Roll number, email address and contact phone number.

Wireless (Wifi) Framework for Schools

Wireless Framework Suppliers - Summary:

The following seven (7) suppliers and products have qualified to be on the Framework. Summary details are provided here.

Framework Suppliers	Agile Networks	Diacom	IT Group	Kedington	Mainline Wireless	Plannet21	Sord Data Systems
Wireless Manufacturer	Extreme Networks	Aerohive	Fortinet/Meru	HP/Aruba	Ruckus	Cisco	Cisco Meraki
Summary of recent purchases/aquisitions involving Frame work manufacturers			Meru was purchased by Fortinet in July 2015	Aruba was purchased by HP in May 2015	Brockade are in the process of purchasing Ruckus		Meraki was purchased by Cisco in Nov 2012
Important points to Note:							After 5 years from installation, if the wifi licence subscription is not renewed within 30 days, Meraki Wifi equipment will cease to function
Support for 802.11a, b, g, n, ac	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Warranty: Minimum 3 Years Next Business Day on-site, full parts and labour cover included as standard.	Yes	Yes	Yes	Yes	Yes	Yes	Minimum 5 years

Template Wifi RFQ email to Suppliers

To: wirelessframework@pdst.ie

Subject: Supplementary Request for Tender (SRFT) for Wireless Network

Dear Wireless Framework Supplier,

Please provide a tender response to this attached RFT as per the Department of Education and Skills Framework for Wireless Networking and Associated Services.

Include any special conditions (if any) that apply to RFT.

Deadline for Receipt of Tenders:

The closing date and time for tender responses is *[Insert Date and time here]*.

Contact Email Address for receipt of Tender Responses:

The designated contact email address for tender responses or clarification questions is: *[Insert contact email address here]*.

Anticipated Award Date:

The anticipated award date is: *[Insert Date here]*.

Best Regards

Insert Name, Contact details & School Details

Tablet/Hybrid Choices



iPad (iOS)
(Apple)



Android, Chromebook
(Google)

(Available from **a range of suppliers**)

‘Hybrid’ devices



Windows
(Microsoft)
(eg., Surface)

(Also **Windows devices** from
a range of suppliers)

Projectors, Interactive Flat Screens (IFS)



Advantages / Disadvantages of IFS

- **Higher quality image**, longer life, lower power
- **No failing lamps**, closing blinds or turning off the lights !
- Lower levels of **tech support**
- **Cost: higher initially**, lower running costs
- **Different screen sizes/cost**

Online Resource: 'Interactive Flat Screens vs Projectors'

Presenting in the Classroom

- **Flexibility of approach** for teachers and students
- **Present from anywhere**
- **Engagement**
- **Collaboration**



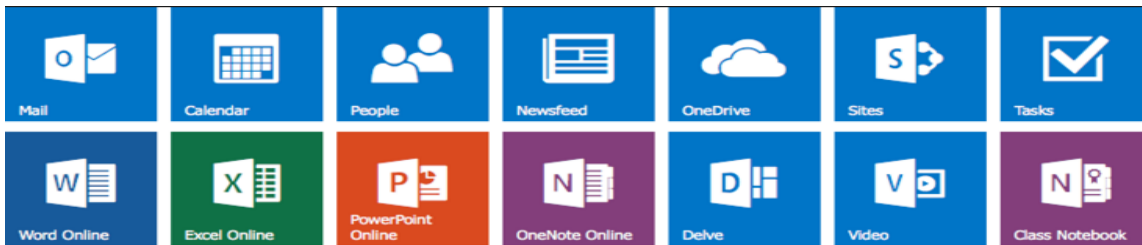
PDST TiE Online Resource: **‘Presenting in the Classroom’**

Benefits of Cloud:

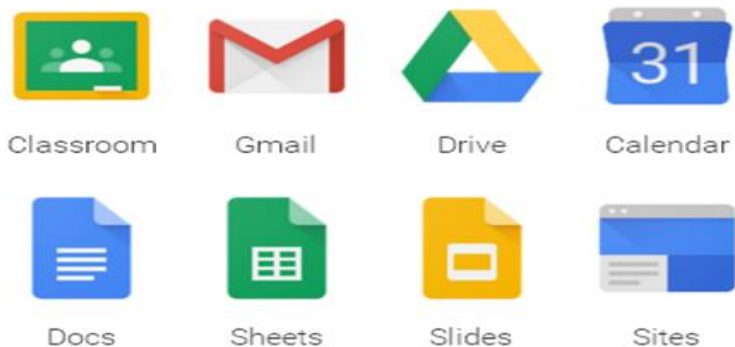
- Supports **flexibility** and **diversity** of approach
- Wider range of Platforms, **Applications**
- **Access** anytime, anywhere, on any device
- **Scalable** model
- **Try before you 'buy'**, low risk
- Range of **cost models** including 'free'



Cloud Ecosystems for Education



**Microsoft
Office365**



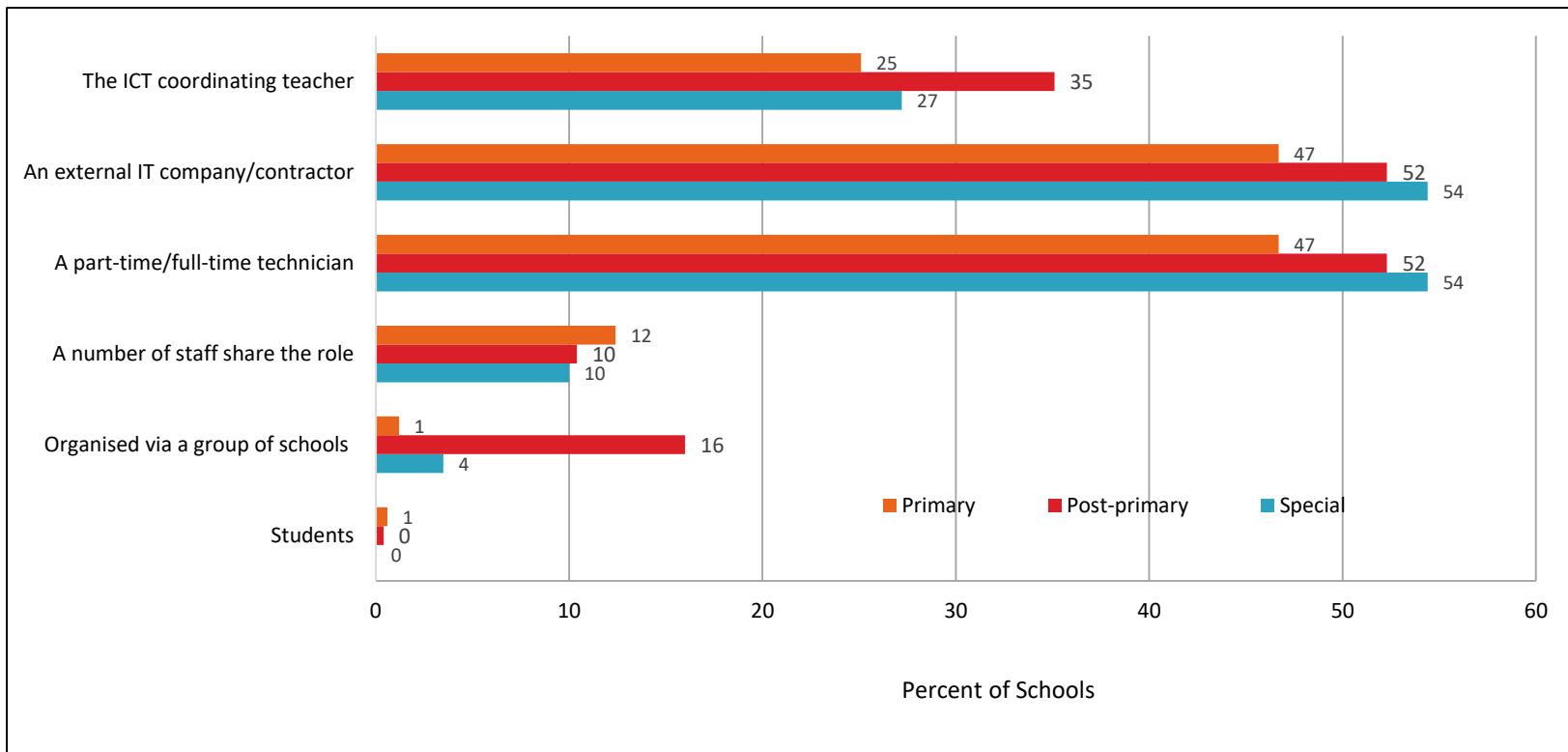
Google Apps For Education (GAFE/GSuite)



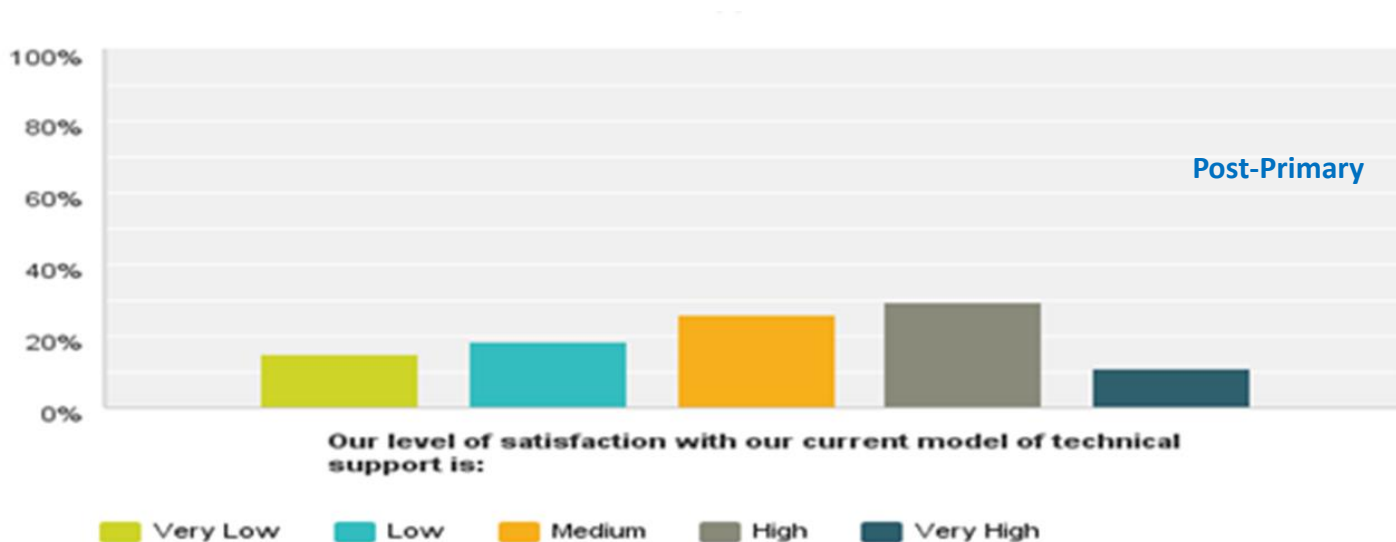
Apple iCloud

Relationship between ICT Infrastructure & Technical Support

Who provides technical support



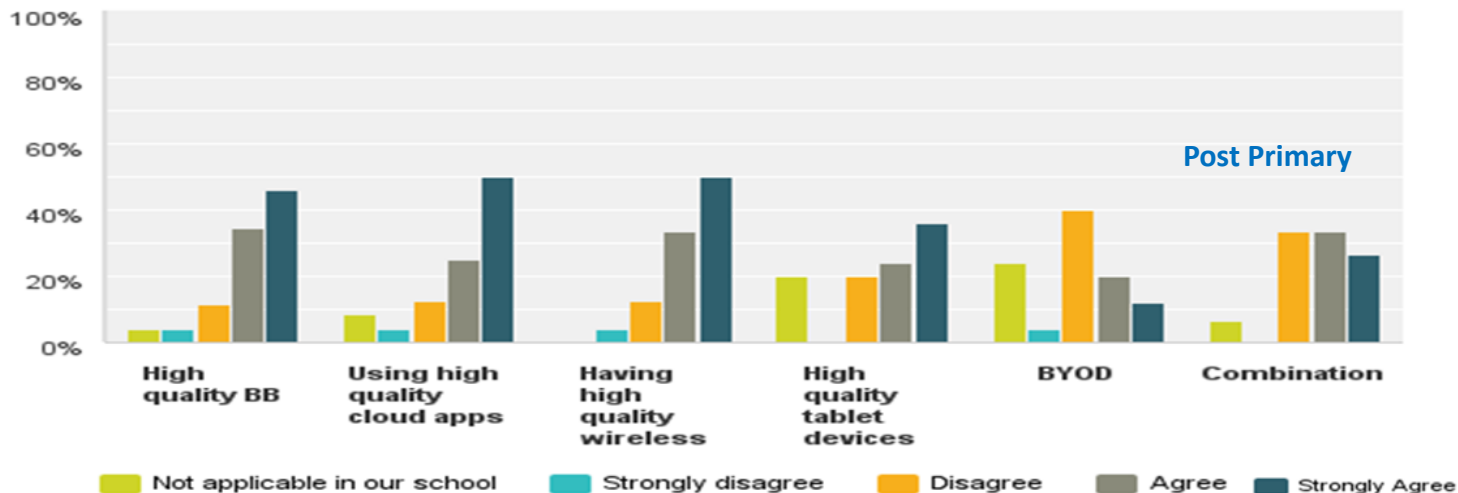
Satisfaction with Technical Support



ICT Infrastructure & Technical Support

Does having elements of high quality ICT infrastructure have the potential to reduce technical support issues in school?

Answered: 26 Skipped: 4

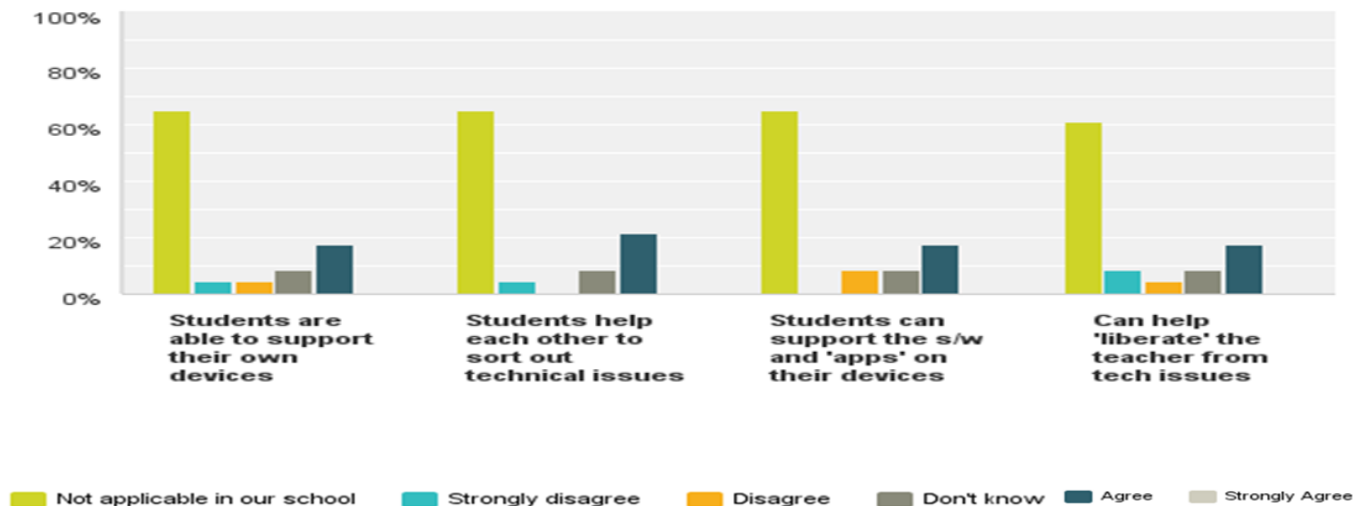


Can students support their own devices?

Where the school allows students to bring in their own computing devices/tablets (BYOD), is there evidence that students can support these devices?

Answered: 23 Skipped: 7

Post-Primary



ICT Infrastructure – Guidance, Support

A range of supports available from PDST Technology in Education



**Procurement
Advice
including
ICT
Frameworks**

**Tailored advice
for schools at
various points
on their
'Roadmap'**

**ICT for new
builds &
extensions**


ICT Advice on:

- Teacher/Student devices
- Networking/Wifi, Servers
- Presenting in the classroom
- Cloud based applications
- Learning platforms
- Technical support
- Broadband

'Technology' Advice on PDST-TiE Website

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Technology



PDST Technology in Education promotes and supports the integration of a high quality ICT infrastructure into learning and teaching for schools. It provides relevant and up-to-date ICT advice and supports to schools on a range of technology-related areas. PDST Technology in Education also coordinates the Schools Broadband Programme, which provides broadband connectivity, content filtering, webhosting, and security services to all Primary and Post Primary schools.

Grant Information

The Minister for Education and Skills, Richard Bruton T.D., has announced an investment of €30m in ICT infrastructure grants for primary and post-primary schools

[Find out More >](#)

Purchasing Frameworks

These Frameworks assist schools in acquiring quality products and services, as well as ensuring good value for money. The Procurement Framework process will greatly simplify purchasing ICT hardware for schools.

[Find out More >](#)

'Planning' on PDST-TiE Website

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[e-Learning Handbook](#)
[e-Learning Roadmap](#)
[e-Learning Case Studies](#)
[e-Learning Videos](#)
[e-Learning Plan Templates](#)
[Plan r-Fhoghlama](#)

Home > Planning >



Planning



Welcome to the e-Learning Plan section of the PDST Technology in Education website. This area contains a number of useful resources to assist schools in developing their e-Learning Plan, from the PDST Technology in Education's e-Learning Handbook and Roadmap to case studies and video exemplars highlighting how teachers are integrating ICT in their classrooms.

e-Learning Handbook

PDST Technology in Education's e-Learning Handbook outlines the process of planning for e-Learning in your school and provides a step by step guide to the development of the school's e-Learning Plan. The Handbook outlines the ...

[Find out More >](#)

e-Learning Roadmap

The e-Learning Roadmap is a planning tool designed to help your school identify where it currently is in relation to e-Learning, and the priority areas for e-Learning Development. It is available in printed and online format....

[Find out More >](#)

e-Learning Case Studies

This section provides some scenarios on how different types of schools set about preparing their e-Learning Plans. These case studies provide practical ideas and information about how other schools have approached the develop...

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e-Learning Videos

Our e-Learning Videos have been filmed in Irish schools and include examples of teachers integrating ICT in their classrooms, as well as interviews with students, teachers, principals and ICT co-ordinating teachers about e-Le...

[Find out More >](#)




Training – CPD section

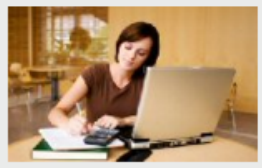
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Training




Teachers – PDST Technology in Education provides courses and other continuing professional development opportunities to support the integration of ICT in the curriculum and help develop e-Learning in your school. There are no course fees.

Note: Face to face courses are delivered through the education centre network. Contact your local education centre for scheduling details and to book a place.

- **Courses section:** detailed course descriptions (face to face and online)
- **Online Courses:** links to TeacherCPD.ie and enrolment information
- **ICT in the Classroom PDFs:** PDFs with useful websites and videos on using ICT in the classroom.

Noticeboard



New online course for Post Primary teachers

'Introduction to Tablets (Post Primary)' is a new, two hour short online course for post primary teachers. The course is suitable for users of Android, iPads and Windows tablets.

[Read More >](#)

Good Practice Videos on PDST-TiE Website

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Post Primary

PDST
TECHNOLOGY
IN EDUCATION

EU Folio – Managing ePortfolios and ICT in a school
from **PDST Technology in Education**



Sarah lived in a bright red house on the side of the road down a lonely lane. She often described her house as unique. Sarah loved her house and especially her bedroom. She loved the bright pink walls surrounding her room. She said the walls are as bright as the sun. In her bedroom she loved to collect teddy bears and gave them all an individual hug before she went to bed. "They would feel sad if I didn't give them all hugs" she used to say. Before she went to bed at night she would say her prayers and then go over to her big window and say goodnight to the moon. "The moon is like a blanket over the sun at night time so we humans can have our time to rest" she often said. After that she hopped into bed. Sarah said "I'm so tired that I could go on a bed of nails." less

03:57

HD vimeo

EU Folio – Managing ePortfolios and ICT in a school

Chris Forde of Athlone community college speaks here about how to introduce ePortfolios as part of the EU Folio project. Since introducing ePortfolios he has noted a move from individual learning to collaborative learning. Assessment of the ePortfolios includes self-assessment, peer- assessment and active assessment from the teacher. The teacher takes on the role of facilitator.

Good Practice Post-Primary Videos



Using ICT to support peer assessment and reflection in DCG



Using ICT to support formative assessment in Senior Cycle Maths



Using ICT to support content creation in Science



Using ICT to support active learning in Geography



Using ICT in Geography



Using tablets to support active learning in Business Studies



Using ICT in History



Using ICT to support revision in Business Studies



Using Scoilnet Services for History



Using ICT in Science



www.pdsttechnologyineducation.ie/en/Good-Practice/Videos/Post-Primary/



Featuring

Click for course description: Scratch for Learning



Coming soon

Click for course planning information for Principals



Featuring

Click for course description: ICT in the Post Primary MFL Classroom



PDST Technology in Education

PDST Technology in Education online courses on ICT in teaching and learning. [ENROL HERE](#)



PDST

PDST online course on Civic, Social and Political Education (CSPE). [ENROL HERE](#)



Course Schedule

Details of the autumn term-time online course schedule are available [here](#).



Your Login Account

You need a Scoilnet account to login and enrol. [Register for account / manage details](#)



Browser Compatibility Test

Check that your browser/device is suitable for accessing our courses



Technical Help and FAQs

Enrolment queries? Can't see the module content? [Click here for FAQs and help files](#)

Online Courses available to Teachers



- Introduction to Tablets
 - ePortfolios
 - Safer Internet Use / Social Media
 - Scratch programming
 - ICT for Modern Foreign Languages
 - Scoilnet Maps (Geography)
-
- All information course descriptions, schedule and how to access online courses is on [TeacherCPD.ie](https://www.teacherCPD.ie)
 - Subscribe to the **PDST Technology in Education newsletter** (via subscription box on the PDST Technology in Education homepage)



Try a specific word or phrase, e.g. bia, multiplication, world war 1 ...

☐ All ☐ Primary ☒ Post-Primary



Welcome to Scoilnet's Post-Primary hub



Science

Interactive digital resources to recap the topic on CELLS.



Teacher Video

Sacred Heart School, Drogheda using ICT to speak about their LCVP experience.



Reformation in History

Resources for revising the reformation in History.



What's New

Recently Added

Most Viewed

Britannica School

Anytime, anywhere access to Britannica for students and teachers.

[More about Britannica School](#)



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Scoilnet – Subject Resources

Welcome to Scoilnet's Post-Primary hub



Threads

Bring your family together this Christmas by collecting local stories



Béaltríail / Irish Oral

Collection of resources to help prepare students for the Irish Oral.



Biology Resources

Online directory of teaching resources for biology teachers.

Scoilnet – Digital Archives



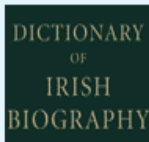
JSTOR Ireland Collection

A collection of journals and other materials from the 16th-20th centuries.

Available in all schools now.

[Read more](#)

[Visit the website](#) 



Dictionary of Irish Biography

The most comprehensive and authoritative biographical dictionary yet published for Ireland.


Available in all schools now. [Read more](#)

[Visit the website](#) 



Irish Times Digital Archive

The digital archive is a complete reproduction of every page of The Irish Times from 1859. Available in all schools now. [Read more](#)

[Visit the website](#) 



Ask About Ireland


Ask About Ireland provides information, images, activities, audio and video on all aspects of Ireland, past and present.

[Visit the website](#) 

Scoilnet Maps - Geography



Science Hooks - Chemistry

 **NUI Galway**
OÉ Gaillimh


Science Education Resource Hook Series

AboutPrimaryChemistryPhysicsBiologyContact

Acids and Bases

The majority of students will know different examples of acids and bases. A common misconception amongst students is that acids are dangerous and corrosive, for example stomach acid (hydrochloric acid) while bases are noncorrosive and not harmful. In this video we aim to display how dangerous and corrosive bases can be.

Video: Aluminium dissolving in NaOH



Chemistry Hooks

- Acids and Bases
- States of Matter
- Carbon Dioxide
- The pH Scale
- Alloys
- Metals
- Separating Mixtures
- Plastics & Polymers
- Elements, Atoms, Compounds and Mixtures
- Solutions
- Carbon
- Air

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59 new articles

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Athletic competition can showcase a dog's s...


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Dung beetle
Turkey spreading its t...

Behind the Headlines


World Book editors highlight breaking news stories and provide links to related background information in World Book.



America Goes Trump
November 9, 2016 In a shocking result, voters in the United States elected Republican businessman Donald Trump to be the nation...



Paris Climate Agreement
November 8, 2016 Yesterday, November 7, officials from around the world gathered in Marrakech, Morocco, for the 2016 United Nation...



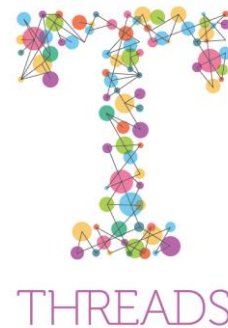
Monster Monday: the Box Jellyfish
November 7, 2016 Under water, the box jellyfish is practically invisible. It is one of the most venomous animals on Earth. It kill...

Atlas

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- Citation Builder
- Compare Places
- Dictionary
- Educator Tools
- How to Do Research
- Interactive Maps
- My Research
- Timelines
- Trivia Quizzes
- What's New
- World Resources

Scoilnet – Threads: Connecting Local Stories

- Providing **a digital space** through which schools can **upload their folklore/oral history projects**.
- Inspired by the 1937 Folklore Commission / INTO project which saw all schools in Ireland (outside Dublin and Cork city) write essays on folklore-related topics, e.g. local customs, holy wells, travelling folk etc.
- **Students to engage with ‘oral history’, on ‘local’ experiences**
- Direct curriculum tie-in with History, Geography and English.



Philosophy underpinning Threads:

The studies of history and geography are **built around a set of events, people, and places spanning time and space** - the threads of history. These **threads, are linked together, interpreted, and analysed creating the fabric of historical understanding.**

Teachers: Explore Teacher Tab



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Order/Download Free Curriculum Resources

02

AUP Policy Tools

03

'How to' Guides and Tips

04

Advice for Teachers

05

Emerging Trends Information



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ICT infrastructure grants for primary an...

The Minister for Education and Skills, Richard Bruton T.D., has announced an investment of €30m in ICT infrastructure grants for primary and post-prim...

Digital Strategy for Schools

2015-2020

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Webwise Online safety checklists

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LATEST VIDEO



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- Explained: What is YouNow? 20 Dec 2016
- Online safety checklists 15 Dec 2016
- Get your FREE Safer Internet Day wristbands 19 Dec 2016

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Relevant links & support contacts

eLearning Planning

www.pdsttechnologyineducation.ie/planning

Queries : elearningplanning@pdst.ie

ICT Guidance and information

www.pdsttechnologyineducation.ie/technology

Queries: ictadvice@pdst.ie

Professional Development/CPD

[www.pdsttechnologyineducation.ie/en/Training/
http://teacherCPD.ie](http://www.pdsttechnologyineducation.ie/en/Training/http://teacherCPD.ie)

Online Learning Resources

www.Scoilnet.ie

Queries in relation to the ICT grant itself to ictpolicy@education.gov.ie

Thank you

Ongoing Discussion... Questions etc

Contact details:

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PDST Technology in Education

tomloneran@pdst.ie

ictadvice@pdst.ie

www.pdsttechnologyineducation.ie/technology