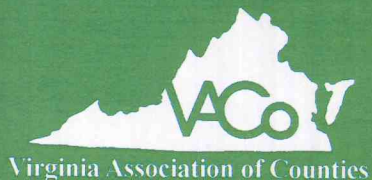


Recognizing the Best in County Government Programs!



2014 Achievement Awards



2014 VACo Achievement Awards

Deadline: June 2, 2014

Application Form

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2014.**


Program Information

Locality Henrico County
Program Title Google Apps for Education
Program Category Information Technology

Contact Information

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Signature of county administrator or chief administrative officer

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Title County Manager
Signature 

Call for Entries

PROGRAM CATEGORY: Information Technology

1. Abstract of the Program

Henrico County Public Schools (HCPS) prides itself on its innovative approach to instruction. We believe in the power of designing high-quality learning environments and providing tools that support the development and use of key 21st century skills. These beliefs are part of our culture and are the heart of our [Teaching Innovation Progression Chart](#) (TIPC). As part of this approach, HCPS has harnessed the power of Google applications since early 2011.

Google Apps for Education (GAFE) is an educational version of Google Apps that is hosted by Google and managed by HCPS. It gives users access to document-creation tools with features like real-time editing, powerful collaboration, and seamless integration with other resources. These tools provide all HCPS users with a variety of benefits, including the ability to stay connected to the learning experience regardless of the time, their location or their computing platform. The integration of Google Apps for Education has given our users an authentic, engaging and productive collaborative experience. The program has created an environment for teaching and learning unlike any HCPS has enjoyed before.

2. The Problem/Need for the Program

While HCPS' use of Google apps started in 2011, until the 2013-14 school year, accounts were manually created and managed by school Instructional

Technology Resource Teachers. Creating accounts this way was time consuming and didn't allow us to support users equitably. In addition, the automation of Google's "single-sign-on" functionality is efficient, productive and easily integrates with other educational services. Productive workflows and cloud-based computing let users stay connected to the educational process at any time, on any device and from any location. Before our adoption of Google apps, this wasn't possible. When we started the program, we knew that we needed the following:

- An equitable distribution of Google applications and services to all HCPS users on an internal domain that could be managed internally.
- Automation of the account and group-creation process, making the HCPS Google Apps for Education experience more efficient and productive.
- Support for the design of productive workflows and cloud-based computing for all HCPS Google apps users across all devices and platforms.
- Equal access to tools and services that provide users with the ability to cultivate key 21st century skills as outline in HCPS Teaching and Innovation Progression Chart.

3. Description of the Program

Because HCPS embraces an innovative approach to instruction, we strive to provide modern, engaging and relevant tools that support the blueprint outlined in the [Teaching Innovation Progression Chart](#). This rubric outlines the skills that our division believes are essential for our teachers and students. The skills are

divided into four areas: research and information fluency; communication and collaboration; critical thinking and problem solving; and creativity and innovation. GAFE provided Henrico County Public Schools with the opportunity to leverage Google's powerful collaborative applications – applications that support the outcomes listed in the teaching innovation chart. Because the apps are so powerful and widely available, they have become an essential component of our work.

In 2011 we adopted Google Apps for Education, giving HCPS users a cloud-based computing solution that was provided by Google, but managed by HCPS. With a single sign-on, users got access to a wide variety of applications promoting communication, collaboration, research and creativity. In addition to the cultivation of key 21st century skills, our users got the ability to engage in cloud computing – with its more productive experience and improved workflow. The ease and flexibility of access also made this an ideal solution for our users. These enhancements profoundly improved the teaching and learning experience, and we recognized the need to distribute the resource to all users equally.

Prior to the 2013-14 school year our services were made available through a manual process. It wasn't efficient, and wasn't robust enough to equitably distribute the resources to all of our users. The Department of Instructional Technology and the Department of Technology recognized the need to change how we provided Google applications for our users, and worked together to refine our processes.

By using our existing active directory structure we were able to automate the account-creation process. This provided for efficient, equitably distributed, equitably managed user accounts. Because creating accounts is now automated, the time once devoted to managing Google applications can now be used for other purposes. The departments can now allocate more resources to the building of educational communities and modeling of transformative uses.

4. Use of Technology

The following list includes technology, websites and software used to support the availability of and communication about HCPS' Google Apps for Education initiative.

- The Internet
 - Google Drive <https://drive.google.com/>
 - [HCPS GAFE Community Webpage](#)
 - [HCPS Google Sites Online](#) (part of community page above)
 - Social media
 - [HCPS GAFE on Twitter](#) @HenricoGAFE
 - [Kippt](#) (social bookmark collection for HCPS GAFE)
- Local server
- Outside server
- Computer
- HCPS active directory database
- Google Apps Directory Sync API programming tool: This tool was used to

sync staff and student accounts through HCPS' active directory structure and to populate student groups in GAFE.

- Google Apps Manager API tool: This tool was used to retrieve account data for Google apps and to take bulk actions on accounts such as password modification, account deletion and other account modifications.
- Doctopus script: This tool is used to populate folders for classes.
- Chrome Web Store app development: Our GAFE team developed a [web application](#) for the Chrome store that provides quick, easy access to the division's GAFE community website.

5. The Cost of the Program

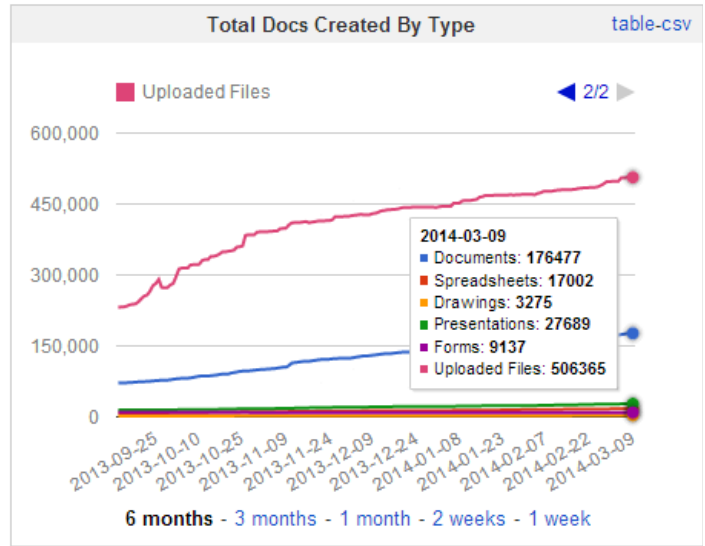
[Google Apps for Education](#) is a free service provided to educational institutions.

The API programming tools used to automate the account creation process were all free open-source tools.

6. The Results/Success of the Program

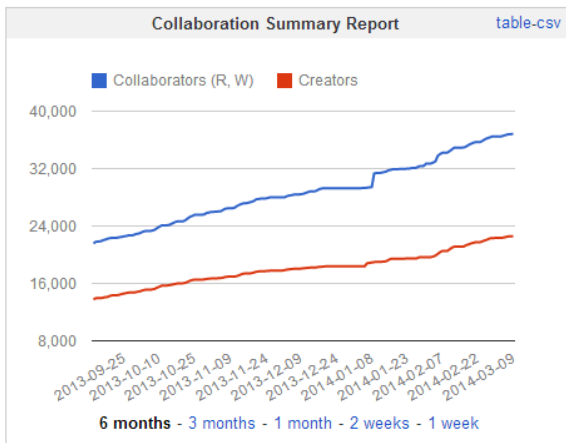
The data indicates a substantial growth in users and collaborative works related to Google applications. The ease of access through a single sign-on, along with a consistent username configuration, has provided a more productive and efficient experience for our users. This is evident through the increase in outputs

from those applications. Data below displays the increase in created and uploaded documents from the six-month period from Sept. 11, 2013 to March 9, 2014. Uploaded documents increased 118 percent, which suggests users are achieving a more productive collaborative workflow through the cloud

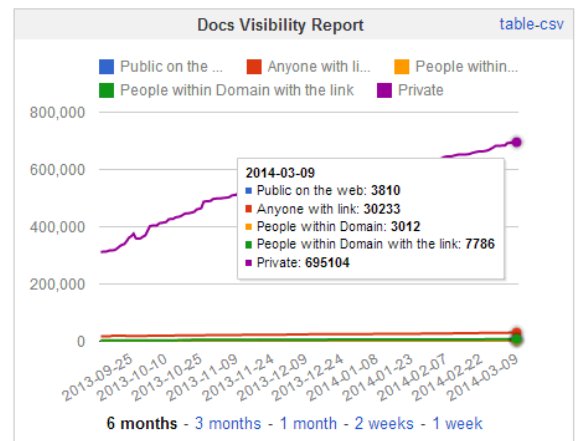


environment.

The increase in HCPS-domain creators and collaborators also supports this conclusion. In the same six-month period, there was a 63.7 percent uptick in creators and a 70.5



increase in collaborators.



The number of documents shared within our domain gives an idea of the success of the program. Between Sept. 1, 2013 and March 9, 2014, 10,798 documents were shared. When publicly accessible documents are included, the figures jump to 44,841 documents. Transferring information in this way is more efficient and timely.

7. Worthiness of an Award

HCPS' Google Apps for Education initiative is remarkable for its innovative approach to the instructional integration and operational management of Google applications. In a division where we have a 1:1 laptop initiative, it is critical that transformative tools are uniformly provided to our more than 53,000 users. With more than 20,000 users creating and 36,000 users collaborating in just the past six months, it's evident that workflows have been enhanced and users are no longer working in isolation. These opportunities were made possible through the combined efforts of the HCPS Department of Instructional Technology and the HCPS Department of Technology. This team worked together to automate the account-creation process, providing an equitable distribution of the resource. The two departments worked to create professional development opportunities to shape the user experience and transcend the limitations of our previous structure. While other counties use Google tools, HCPS' strategic efforts set the school division apart. By automating the provision of accounts and creating a structure

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Henrico County, Virginia

to support the development of collaborative learning environments, the division is making full and creative use of this resource. This type of educational innovation makes Henrico County Public Schools a leading force in developing progressive, authentic educational experiences that are essential in preparing our students for the future.

Program Category: Information Technology

Submitted By: Kourtney Bostain