PushButtonPD™

HISTORY

The original *DHS PushButtonPD™* (Gen1) requirements originated from the Homeland Security Advisory Council Cyberskills Task Force Report issued in the Fall of 2012. The Cyberskills Management Support Initiative (CMSI) office was established in April 2013 to fulfill the report mission objectives — including the ability to adopt and maintain an authoritative list of mission-critical cybersecurity tasks and to make the hiring process smooth and supportive. The question became how to operationalize mission-critical cybersecurity tasks into a "smooth and supportive" hiring process.

Although work had begun in August 2013 to manually perform this work, it was quickly clear that manual processes were no more efficient than status quo. A pre-existing automated tool alternative was considered; however, the alternative (a) was not fully functional, (b) would require significant funded contractor development support, and (c) did not meet many of the fundamental Agency and End-User requirements.
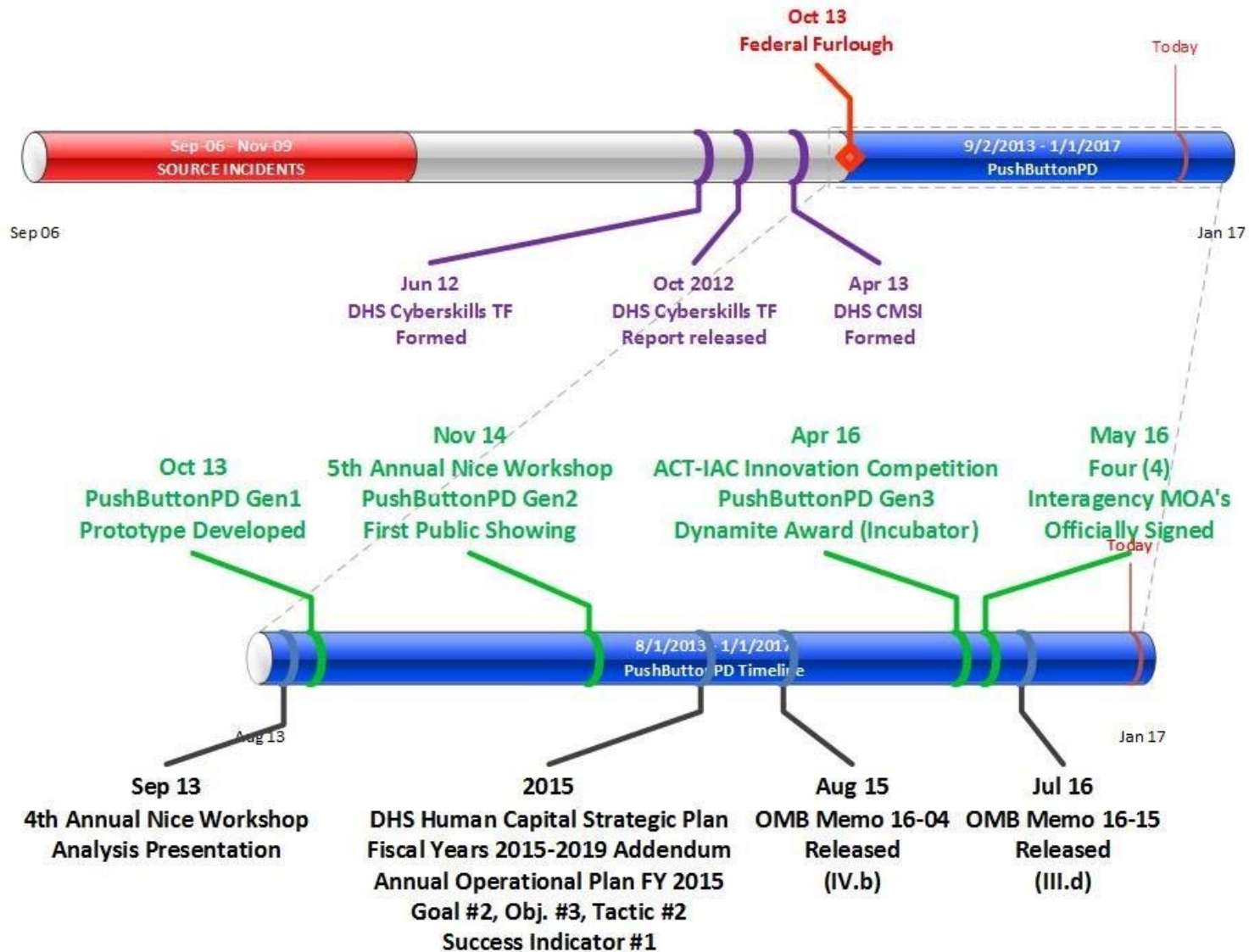
At the September 2013 Annual National Initiative for Cybersecurity Education (NICE) Conference, the Executive Director of DHS CMSI, Renee Forney, discussed during a roundtable session how the federal Position Description impacted the federal human capital processes—especially hiring. The first step to filling any federal job is creating an accurate position description; which may also impact a host of follow-on human capital-related processes (ex. monetary incentives for individuals or groups, identification of major duties, job announcements, resume screening, personnel actions, etc.). However, generating high-quality, highly-technical position descriptions required the ability to fuse multiple, disparate guidance sources in an easy-to-use interface; adaptable to any specific agency or organizational requirements.

The following month, during the October 2013 Federal Government shutdown, a fee-for-service Federal Employee programmer was able to draft a working Gen1 prototype tool capable of meeting the baseline requirements. The Tool utilized a simple Excel workbook; requiring no funding, little to no user training, and while eliminating many of the operationalization hurdles.

By the following year, at the 2014 NICE Conference, the PushButtonPD™ Gen2 was officially presented by the Executive Director of CMSI to the Public was capable of producing seventeen (17) types of Occupational Series Position Descriptions. Gen3 was finalized by August 2015; supporting thirty-six (36) Occupational Series, and this version of the tool received the 2016 ACT-IAC Dynamite Award (Incubator Category). The Gen3 tool is also the tool mentioned in both OMB Memorandum 16-04 and 16-15.

The tool continues to undergo further development and refinement under the guidance and support of the DHS National Initiative for Cybersecurity Careers and Studies (NPPD NICCS) and Human Capital Policy and Programs (OCHCO HCPP). The current version, Gen4 was released in December 2016 rebranded as the *DHS PushButtonPD™*; incorporating data from NIST Special Publication 800-181, NICE Cyberskills Workforce Framework (NCWF); currently supporting fifty-six (56) Occupational Series.

MAJOR EVENT TIMELINE

Oct 13
Federal Furlough

Today

Sep-06 - Nov-09
SOURCE INCIDENTS

9/2/2013 - 1/1/2017
PushButtonPD

Sep 06

Jan 17

Jun 12
DHS Cyberskills TF
Formed

Oct 2012
DHS Cyberskills TF
Report released

Apr 13
DHS CMSI
Formed

Oct 13
PushButtonPD Gen1
Prototype Developed

Nov 14
5th Annual Nice Workshop
PushButtonPD Gen2
First Public Showing

Apr 16
ACT-IAC Innovation Competition
PushButtonPD Gen3
Dynamite Award (Incubator)

May 16
Four (4)
Interagency MOA's
Officially Signed

Today

8/1/2013 - 1/1/2017
PushButton PD Timeline

Aug 13

Jan 17

Sep 13
4th Annual Nice Workshop
Analysis Presentation

2015
DHS Human Capital Strategic Plan
Fiscal Years 2015-2019 Addendum
Annual Operational Plan FY 2015
Goal #2, Obj. #3, Tactic #2
Success Indicator #1

Aug 15
OMB Memo 16-04
Released
(IV.b)

Jul 16
OMB Memo 16-15
Released
(III.d)

THE FUTURE

The tool has already expanded beyond its initial target audience. The first and second generation of the tool was initially and only designed to promulgate Homeland Security Advisory Council Cyberskills standards within DHS. Subsequent tool generations:

- Incorporated the National Initiative for Cybersecurity Education (NICE) and NICE Cybersecurity Workforce Framework (NCWF) requirements;
- Incorporated the Federal Acquisition Institute (FAI) acquisition categories;
- Expanded to non-cybersecurity occupational series;
- Expanded to non-DHS agency requirements.

The underlying MATA (More-Agile-Than-Agile) methodology under which the tool was developed could be repurposed to accomplish other projects. In theory, the same underlying methodology and/or source code could be:

(a) Repurposed to other processes or projects (ex. Contract SOW and PWS generation, or other complex processes);

(b) Redeveloped into other, large-scale tools with minimal development risks (i.e. the tool is already "working", so it's just a matter of translating the code);

(c) Used to reduce the development lead time on existing projects via rapid prototyping. Specifically, the technique of rapidly prototyping using Excel source code in MATA development fashion permits very short delivery timelines to address software bugs, feature enhancements, or data corrections / updates.

(d) Used to reduce overall project or program costs for very risky projects for which the guarantee of success is unclear. The following table provides a real-world example of this project's costs to date.

EXPENDITURES / COST AS OF DECEMBER 2016

Gen 1 Development Hours (Proof of Concept)	~ 180 hrs
Gen 2 Development Hours	~ 1920 hrs
Gen 3 Development Hours	~ 1920 hrs
Gen 4 Development Hours	< 810 hrs
Development Team Size	1 (Federal)
Capital Expenditure - Development (H/W)	$0
Capital Expenditure - Development (S/W)	$0
Maintenance Cost (H/W)	$0
Maintenance Cost (S/W)	$0
ACT-IAC Innovation Competition Costs	< $500
Travel Costs	< $4,000
Federal Budget Allocated	$0
Licensing Cost / Chargeback (for use or to other agencies)	$0

REFERENCES[1]

- CIO Council; "CIOC Blog; Closing the Talent Gap: OPM's Collaboration on the Cybersecurity Workforce Strategy", August 22nd, 2016, https://cio.gov/closing-the-talent-gap-opms-collaboration-on-the-cybersecurity-workforce-strategy/
- OMB Memorandum 16-15 "Federal Cybersecurity Workforce Strategy", July 12, 2016, https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-15.pdf, [Paragraph III.d. states "Promote the use of the PushButtonPD™ that managers, supervisors, and HR Specialists can use to rapidly draft a Federal employee Position Description (PD) leveraging accumulated knowledge in order to streamline position classification."]
- Ogrysko, Nicole, "DHS says it can help you write the perfect cyber job announcement ",May 20, 2016 11:36 am, http://federalnewsradio.com/workforce/2016/05/dhs-says-can-help-write-perfect-cyber-job-announcement/
- Federal Times, "2016 Igniting Innovation Award Winners", April 27, 2016, http://www.federaltimes.com/picture-gallery/government/2016/04/27/2016-igniting-innovation-awards/83591840/
- Forney, Renee, "CyberSkills Managment Support Initiative Push Button Position Description Tool", 2016 Defense Intelligence Human Capital Summit, http://dcips.dtic.mil/documents/Day1_1315-1415hrs_PushButtonPD.pdf
- OMB Memorandum 16-04 "Cybersecurity Strategy and Implementation Plan (CSIP) for the Federal Civilian Government", October 30, 2015, https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-04.pdf [Obj. # 4, Paragraph b. states "The CSIP directs DHS to begin piloting their Automated Cybersecurity Position Description Hiring Tool across the Federal Government." The tool mentioned is the DHS CMSI PushButtonPD™.]
- DHS Human Capital Strategic Plan Fiscal Years 2015-2019, Addendum, Annual Operational Plan for Fiscal Year 2015, Goal #2, Obj. #3, Tactic #2 Improve recruitment process by ensuring clearer articulation of position requirements; Success Indicator #1 Extend "push button PD" to one additional program area.
- 2015-2016 DHS Management Directorate (MD) Integrated Priority Areas (IPAs) 4.1 Cybersecurity and technology workforce, 4.2 Efficient and effective end-to-end hiring process.
- GAO-14-677 OPM Needs to Improve the Design, Management, and Oversight of the Federal Classification System, Published: Jul 31, 2014. Publicly Released: Sep 2, 2014
- DHS Initial Implementation of the Special Cybersecurity Workforce Project memorandum dated May 27, 2014
- OPM Special Cybersecurity Workforce Project memorandum dated July 8, 2013
- Homeland Security Advisory Council (HSAC) Cyberskills Task Force Report, Fall 2012, Obj. #I, Recommendation 1: "Maintain an authoritative list of mission-critical cybersecurity tasks" and Obj. II, Recommendation 5: "make the hiring process smooth and supportive"

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[1] In reverse chronological order