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

Sep 06 - Nov 09
SOURCE INCIDENTS

Sep 06

Oct 13
Federal Furlough

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

Jun 12
DHS Cyberskills TF
Formed

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

Oct 14
5th Annual Nice Workshop
PushButtonPD Gen1
Prototype Developed

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

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

Jan 17
Jan 17

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

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

Jan 17

4th Annual Nice Workshop
Analysis Presentation

Sep 13

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

Aug 15

Dec 13

Sep 06
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

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

- 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.
- DHS Initial Implementation of the Special Cybersecurity Workforce Project memorandum dated May 27, 2014
- OPM Special Cybersecurity Workforce Project memorandum dated July 8, 2013

1 In reverse chronological order