I’d like to thank Treasury’s Office of the Fiscal Assistant Secretary for the opportunity to present at today’s Town Hall meeting on Data Transparency. My name is Campbell Pryde and I’m President and CEO of XBRL US, the nonprofit standards organization for XBRL reporting in the United States. XBRL is a technology standard that is used around the world for the reporting of financial and other business data by public companies, government agencies and bank institutions.

The mission of XBRL US is to promote the use of XBRL standards, where they make sense, for business reporting within the United States. XBRL US is the US jurisdiction of a global organization, XBRL International, which is responsible for maintaining the XBRL technical specification.

XBRL US was awarded the contract to build out the original US GAAP Taxonomy that is currently being used by over 9,000 public companies to report their financial statement information to the Securities and Exchange Commission (SEC) every quarter. Initially as Chief Standards Officer, and subsequently as CEO of XBRL US, I was charged with leading the development and implementation of the SEC program. The SEC also awarded XBRL US contracts to develop XBRL taxonomies for mutual fund and credit agency reporting. And we have developed a taxonomy for corporate actions reporting as well, working with the financial services industry.

We wholeheartedly support the effort underway within Treasury and the Office of Management and Budget to establish government-wide, nonproprietary data standards for business reporting. Standards for government performance reporting can result in much more reliable, consistent and timely data. Better, more timely data will allow agencies and the Administration to set policy more effectively, direct funds towards the most effective programs and eliminate waste and fraud. Standards will help the American taxpayer understand how their dollars are spent.
Section 2 – Transforming financial management reporting through standardized data exchanges.

**Question 2B. How have non-proprietary industry standards for exchanging data been implemented?**

Non-proprietary, industry standards include shipping containers, railroad tracks, electrical voltage, telephony, and Internet protocol. Used correctly, non-proprietary, industry-driven data standards reduce costs and improve access to large and small data consumers alike.

In 2009, the SEC mandated the use of XBRL, an open standard for the reporting of financial statement data for public companies. In 2004, the Federal Deposit Insurance Corporation (FDIC) began requiring bank institutions to report in XBRL. XBRL makes data computer-readable across diverse programs and platforms, enabling transparency, accountability and efficiency in reporting. XBRL was developed by a global, industry-wide consortium of issuers, accounting firms, technologists and data consumers to create a single standard for the distribution of business information. XBRL can be, and currently is, being used in multiple domains for financial statement and other business reporting by public companies, bank institutions, government performance tracking and securities processing data in over 40 countries around the world.

XBRL relies on XML tags, which give data context and can include the name of the element itself, its definition, date, and other attributes. An example of a tag from the US GAAP Taxonomy is Earnings per Share, or in the case of government reporting, a concept could be Grant Awards Amount.

But XBRL does much more than just provide XML tags. It adds structure, like that which can be used in financial tables, and data attributes like unit and period type that are necessary for financial reporting and that must be used consistently by all reporting entities. XML by itself does not standardize the components that are unique to business reporting such as reporting periods and the name of the entity doing the reporting. Without standardizing these components the data produced using XML in one application requires a unique interface to get it into a different XML application as the definition of the reporting components cannot be assumed to be consistent. The structure in XBRL was designed to 1) ensure consistency, and 2) handle the complexities of business reporting.

**Question 2B. How have non-proprietary industry standards for exchanging data been implemented?**

To properly implement non-proprietary industry standards requires an open, collaborative development process. All stakeholders, including creators, data aggregators/intermediaries, data consumers and software providers, must have a voice in developing the terms to be reported and guidance on how they are used. Obtaining buy-in from the supply chain is critical to ensuring a successful implementation. Standards should be developed in a transparent and open process with a public review period of sufficient length such that all stakeholders can be heard.
The US GAAP Taxonomy was developed following this process. And today, the Financial Accounting Standards Board (FASB), which is tasked with maintaining the taxonomy, continues to follow this process with a new release of the taxonomy each year, vetted through a public review.

**Question 2C. How have you benefited from implementing the industry standard for exchanging data?**

The best way to understand how the use of standards, like XBRL, have benefited the industry is to compare the current state of public company reporting with XBRL to the way that stakeholders, like investors, analysts, public companies, auditors and regulators, obtained financial statement data before XBRL.

Today’s XBRL formatted data has five key benefits versus non-XBRL data: 1) it is more detailed, 2) it is available faster, 3) it is cheaper to extract and use, 4) it can be freely distributed without restrictions and 5) it has the potential to be significantly more accurate and consistent across a dataset.

Commercial databases are the most common means to obtain corporate data for analysis and investment. Before XBRL, data was delivered to the SEC and made available electronically only in HTML or ASCII Text format. To even begin analyzing corporate data required rekeying and databasing all the financial statement data. Because of the difficulties in working with flat files of information, the corporate data produced by commercial entities was typically a subset of what companies actually reported, and often only large- and mid-cap company data was published.

A study conducted by Oxide Solutions compared XBRL data to commercial databases. It found that one of the large commercial databases contained 976 line items, while the total number of US GAAP reported elements is 16,483 – all of which can be accessed in XBRL. The same commercial database contained data for only 6,956 companies. XBRL data is available for more than 9,600 public companies – every company that reports in XBRL to the SEC.

The second benefit of structured data is greater timeliness. Given the work involved to rekey and validate every datapoint, public company data available before XBRL was not timely and often was published weeks or even months after the company filed. Financial statement data today is available to extract minutes after it’s been submitted to the SEC. The same will hold true for government data so that payments made for grants, loans or any other government expenditures can be made available to the public as soon as they are submitted.

The third benefit is reduced cost. Computer-readable data is significantly cheaper to access, manipulate and analyze than data that must be rekeyed and validated. The benefits of cheaper corporate data affect not just the investor but the public companies themselves, in the form of a lower cost of capital as investors are drawn towards companies that are more transparent. In government reporting, standards reduce cost because it’s significantly easier and less labor-intensive for agencies to extract and analyze data.
The fourth benefit is the ability of users to freely redistribute the data without restriction. The ability to use the data for any purpose without the need to license the data makes the information far more useful to far more users. The fact that the data can be used for commercial purposes means that new businesses and growth opportunities can be created in the economy.

The fifth benefit of structured data is consistency and accuracy. This is probably the biggest issue in government reporting today. With structured data, consistency becomes “baked into” the process starting with the initial development of terms for the taxonomy. Creators, intermediaries and data consumers must reach consensus on the definitions and attributes of every concept that is reported. For government reporting, this means that agencies, contractors and consumers must agree on the definition of a concept like Grants Award or Research & Development Contracts. Through multiple reviews, every stakeholder has an opportunity to weigh in on the terms used. Because of the structure of the standard, critical features of a fact such as the period or unit are applied consistently. While this requires some work upfront during the implementation phase, it serves to head off confusion later on when agencies submit data.

Accuracy goes hand in hand with consistency. Because the data is structured and all elements reported are clearly defined, the data produced is generally more accurate. In addition, automated validation rules can be put in place such that the creators of the data can “check their own work” prior to submission to catch errors. Validation is used by the FDIC in their XBRL implementation. Banks submitting data are alerted to errors as they report so that they can make corrections before their final submission. And most importantly because the XBRL standard makes data computer-readable, it can be extracted for analysis without the need to rekey, eliminating errors that can be introduced into the data when it is parsed by data aggregators.

Corporate XBRL Data Usage Today

While the full benefits of XBRL formatted financial data have not yet been realized, we have seen substantial growth in usage of XBRL public company data. Just two years ago, only one of the large data aggregators was utilizing XBRL data. Today five commercial database providers use XBRL data, with each organization serving thousands of institutional and individual investors.

XBRL has also spawned new companies, with at least twelve new analytical tool provider startups today. Because XBRL is freely available, small startups can much more easily develop products to serve the marketplace and compete with large, established providers. New providers of data mean greater competition in the marketplace, driving down costs of analytical tools to individual users. This can be expected to happen in government data use as well – bringing more valuable information about government spending to the American public.
**Question 2D. How have you increased transparency and/or reduced reporting burden by implementing the industry standard for exchanging data?**

Transparency can only be achieved by clearly defining concepts within a taxonomy that all members of the reporting supply chain agree upon, and by establishing guidance on how to implement those concepts. This requires significant upfront work in engaging all stakeholders and reaching agreement on definitions and structure of the taxonomy. The definition of a Loan Award may seem obvious but different agencies may have slightly different ways of defining that concept. By working together to agree upon the definition of concepts reported, on how time period and units are used, the data ultimately reported will be fully transparent both for creators and consumers. In the long run, the upfront investment made during development will reduce the burden on agencies submitting data as they will be part of the process and will be given guidance with no ambiguity.

**Question 2E. What suggestions and/or lessons learned do you have for the Federal Government in implementing standards for exchanging financial data?**

Although the SEC implementation of XBRL can be seen as largely successful, with thousands of public companies reporting and both large and small data consumers beginning to extract data, consumption of XBRL financial statement data has been slower than expected. Large data providers have substantial investments in legacy systems that operate off HTML files of public company financials. And while XBRL-formatted financials are significantly more transparent, consistent and timely than the HTML version, there have been some data quality challenges that we, as an industry, are currently working to address. Given the industry’s many years of experience with one of the largest implementations of structured data in the world, we are pleased to be able to share some of the many lessons learned:

- **Establish proper governance.** It’s important to have sufficient oversight and ongoing evaluation of milestones and deliverables by the sponsor of the program (OMB and Treasury), as well as by key stakeholders (individual agencies, users of the data, software companies).

- **Engage key stakeholders and give the public the opportunity to provide input.** Creators, intermediaries, data consumers and software providers (for creation, database and analysis tools) must be involved early on to ensure successful adoption. Ensuring that all parties buy-into the process, will lead to more rapid adoption throughout the supply chain. Prototypes of reporting terms can be used by software providers to test their tools and ready them for full implementation. Creators and consumers alike can provide input to make the creation and extraction of data as successful as possible. Members of the public are consumers of data, too, and should be afforded the opportunity to provide input through a well-communicated public review process that allows comments to be submitted. Every comment should be reviewed and potentially incorporated into the final product, as appropriate.

- **Develop proper guidance for data issuers.** Creators of the data, e.g., federal agencies, must have sufficient clear, concrete guidance in order to effectively submit accurate data. Ideally, automated validation should be built into the system so that federal agencies can quickly
and painlessly identify problems with their inputs and correct them before data submissions are made.

- Establish an ongoing process for oversight and evaluation of data submitted. Adequate oversight and continual evaluation of data submitted must be conducted by an authoritative body to ensure not just compliance, but proper submissions and good quality data. The June 2014 GAO report on Data Transparency stated that “While OMB placed responsibilities on agencies to ensure their reported information is accurate and substantiated by supporting documentation, this approach has had limited effect on the overall quality of the data... reinforcing the need for a more comprehensive oversight process by OMB and more specific guidance from OMB on how agencies are to validate information reported to USASpending.gov.” We have found that public company issuers need more guidance than what was initially provided in the SEC program. Today, the FASB provides implementation guides and the XBRL industry is working together to provide clear, comprehensive guidance that can be implemented in an automated fashion. We have also found that issuers require evidence of greater regulatory oversight as incentive to “self-police” their work. It’s important for the creators of the data to be shown the importance of their submissions by the regulatory organization overseeing them.

- Set up a strong support and maintenance program for the taxonomy. Changes in reporting needs require continuous review and revisions to the taxonomy. The maintenance program should mirror the level of rigor put in place for the development of the taxonomy itself with proper governance and stakeholder review.

Section 3 – Technical Implementation: Industry Perspective

**Question 3B. What is possible from a technical implementation perspective for improving access to data?**

Using a nonproprietary, free and open standard means that software or tools that work with that standard can be adapted to work with any reporting implementation. Software that has been created to work with data from one XBRL taxonomy, like US GAAP, can be leveraged to work with another XBRL taxonomy, like one that reports on government expenditures. This is important because it means that new implementations enter a competitive marketplace where there are already numerous tools that perform analysis, create data, extract data. And that means lower cost for all links on the supply chain, as competition drives down cost. Use of a commercially built system with proprietary concepts and aggregations means that creators and users are shackled to a single system and often a single commercial entity. Without competition from multiple providers, costs will rise and there is no incentive to continually improve the tools available.

Because standards mean that data is cheaper to create and extract, reporting of information can be expanded to include other data items that may be of interest, but that previously were too difficult (expensive) to easily compile. This was the case for financial statement data. Before XBRL, data aggregators only extracted primary financial statement items and often only for the larger
companies; today with XBRL, anyone with an XBRL-enabled tool can draw in detailed and extremely valuable information from public company footnotes, expending the same amount of effort to extract data for 9,000 public companies as they would for just the Fortune 500.

**Question 3C. What is possible from a technical implementation perspective for displaying federal spending information in graph or other visual formats?**

Traditional graphs and data visualization can be significantly enhanced when computer-readable, structured data is used, primarily because the graphical display can be “real-time”. New SEC filings, or in the case of government data, new awards, can continuously populate an existing graph to identify trends as they are happening.

For example the pie chart below shows R&D expenditures in the manufacturing industry. The data is populated as each new public company filing is submitted to the SEC. Imagine how this would work with government contracts where new award data becomes available within minutes of submission by the agency. Regulators would have more timely data on which to base policy-related decisions. The American taxpayer would have the confidence that they are kept abreast of where their dollars are spent on a real-time basis, rather than waiting weeks or even months for data to arrive. Members of Congress and the administration will always have current data on which to provide oversight and protection for the American public.

The chart above was developed by XBRL US as a demonstration of the kind of reporting that can be conducted, showing that R&D expenditures in the manufacturing industry are $148 billion. The data is compiled as companies make submissions so a rolling tally of the latest trends are always available.
Second, because it is easier to collect and report more granular data with an industry standard like XBRL, greater insights can be gleaned through tables and charts of more detailed information.

XBRL US and XBRL US members have a wealth of experience in structured data implementations, from the perspective of software companies, preparers, intermediaries and data consumers, and we stand ready to assist Treasury and OMB in your efforts to implement the requirements of the DATA Act.

Sincerely,

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