WORKFORCE INFORMATION ADVISORY COUNCIL:

CHALLENGES AND OPPORTUNITIES IN WORKFORCE AND LABOR MARKET INFORMATION

The Workforce Information Advisory Council was established by Congress to advise the Secretary of Labor on the Federal-State workforce and labor market information system—how well it is currently working, what improvements are needed, and how the Federal and State governments can enhance cooperation in managing the system. The Council, comprised of members representing both public and private interests, first convened in 2016.

The Council's responsibilities are to:

- Examine workforce and labor market information issues;

- Seek information on innovative approaches, new technologies, and data to inform workforce and economic development decision making and policy; and

- Advise the Secretary on how the workforce and labor market information system can best support workforce program planning and development.

WHAT IS WORKFORCE AND LABOR MARKET INFORMATION?

Workforce and labor market information consists of the data and information used by businesses, workers, students, jobseekers, education and training providers, workforce development planners and policymakers, and others, to make informed decisions in areas such as hiring and advancement, career choice, curriculum development, and investments in training.

Workforce and labor market information is essential to the nation's economy, providing for the efficient operation of labor markets by supplying quality labor market intelligence. Accurate, objective, relevant, timely, and accessible workforce and labor market information is critical for:

- Building a skilled workforce that spurs business competitiveness and economic growth;

- Strengthening career pathways and guiding skill attainment for good jobs, economic opportunity, and career growth;

- Understanding the rapidly changing nature of work and how it impacts the workforce and U.S. economy; and

- Ensuring workforce training and education funds are used effectively.

OPPORTUNITIES FOR IMPROVEMENT

The Workforce Information Advisory Council has currently identified six areas in which there are opportunities for improvement to the workforce and labor market information system. The Council will evaluate these opportunities and provide its recommendations for improving the system to the Secretary of Labor.

OPPORTUNITY #1: Aligning Education and Workforce Training with Industry Needs

OPPORTUNITY #2: Informing Career Decisions of Students and Workers

OPPORTUNITY #3: Determining the Effectiveness of Workforce Training and Education Programs

OPPORTUNITY #4: Understanding the Characteristics of the Workforce

OPPORTUNITY #5: Making Workforce and Labor Market Information More Accessible and Relevant to End Users

OPPORTUNITY #6: Enhancing Government Data Sharing, Collaboration, and Funding among Statistical Agencies

CONGRESSIONAL COMMITMENT TO WORKFORCE AND LABOR MARKET INFORMATION

The Workforce Innovation and Opportunity Act of 2014 established the Workforce Information Advisory Council to advise the Secretary of Labor on the Federal-State workforce and labor market information system—how well it is currently working, what improvements are needed, and how Federal and State government can enhance cooperation in managing the system. The Council, consisting of fourteen members representing a broad mix of knowledge and public and private sector interests, was chartered and convened in 2016 under the auspices of the Employment and Training Administration in collaboration with the Bureau of Labor Statistics. This informational report outlines the work of the Council in the coming months to fulfill its Congressional mandate and provide specific recommendations to the Secretary in 2017.

Workforce Innovation and Opportunity Act

The Act affirms and expands the nation's commitment to a robust information system—a system of employment and labor market statistical programs that dates to the 1940s. Today it supports a wide range of labor market decision makers with an extensive array of data, tools, and resources. The Act emphasizes that national, state and local workforce information be developed, disseminated, and used to:

• Improve the functioning of state and local labor markets by providing labor market participants—businesses, workers, students, and educators—the information they need to make good decisions; and

• Support workforce system decisions concerning the designation of local workforce areas, development of regional workforce plans, identification of in-demand industries and occupations, development of workforce system performance measures, and allocation and targeting of Federal workforce development funds.

The Act requires the Secretary of Labor to formally consult with the Workforce Information Advisory Council regarding evaluation and improvement of the nationwide workforce and labor market information system and statewide systems that comprise the nationwide system, and how the Department of Labor and the States will cooperate in the management of those systems.

In addition, the Act strengthens the governance structure for the nation's workforce and labor market information system by:

1. Giving the Employment and Training Administration shared responsibility, with the Bureau of Labor Statistics, for the Federal leadership and management of the system;

2. Emphasizing the requirement that the Secretary of Labor develop a two-year plan for the improvement of the system; and

3. Establishing the Workforce Information Advisory Council to provide direction and feedback on labor market information effectiveness and customer needs.

Workforce Information Advisory Council

The Council was chartered and convened in 2016, and launched its work during the first meeting in July of 2016. The Council will accomplish its responsibilities by:

• Examining workforce and labor market information issues;

• Seeking information on innovative approaches, new technologies, and data to inform workforce and economic development decision making and policy; and

• Advising the Secretary on how the workforce and labor market information system can best support workforce program planning and development.

The Council's website, https://www.doleta.gov/wioa/wiac/, provides a copy of the charter along with information documenting meetings and activities.

IMPORTANCE OF WORKFORCE AND LABOR MARKET INFORMATION

Quality Labor Market Intelligence

Workforce and labor market information is essential to the nation's economy, providing for the efficient operation of labor markets by supplying quality labor market intelligence. **Accurate, Objective, Relevant, Timely, and Accessible** workforce and labor market information is critical for:

- Building a skilled workforce that spurs business competitiveness and economic growth;
- Strengthening career pathways and guiding skill attainment for good jobs, economic opportunity, and career growth;
- Understanding the rapidly changing nature of work and how it impacts the workforce and U.S. economy; and
- Spending workforce training and education funds effectively.

The nation's labor markets cannot function efficiently and effectively without quality information to support the investment decisions of the workforce development system—Federal and State policymakers; State and local Workforce Development Boards; Federal, State, and local government agencies; and frontline staff—and the investment decisions of business managers, students, jobseekers, workers, and educators.

Workforce and Labor Market Information Users and Uses

The workforce and labor market information system collects, analyzes, and disseminates a wide range of information, from principal employment statistics such as unemployment rates and job levels to complex analyses of topics such as in-demand occupations and rural employment challenges. Serving a broad range of customers, the system provides statistical data and related information to answer key questions such as the following.

EXAMPLES OF EXISTING RESOURCES

Rigorous Surveys/Data Collections
- Occupational Employment Statistics (OES)
- Current Employment Statistics (CES)
- Local Area Unemployment Statistics (LAUS)
- Quarterly Census of Employment & Wages (QCEW)
- Employment Projections (EP)
- Occupational Information Network (O*NET)
- Current Population Survey (CPS)
- American Community Survey (ACS)
- Local Employment Dynamics (LED)

Administrative Data Systems
- State Workforce Data Quality Initiative systems
- Business Employment Dynamics
- Local Employment Dynamics

Information Tools
- Occupational Outlook Handbook
- MyNextMove
- MySkills MyFuture
- OnTheMap

USERS	QUESTIONS WLMI* CAN ANSWER
Jobseekers, Students, Workers	• What industries and occupations are growing in my area? • How much do different occupations pay? • Which careers match my skills? • What are the job openings in my area? What are the hot jobs? • What education, training, and credentials do I need for specific careers?
Businesses	• What is the size and what are the skills of the workforce in places where I am looking to expand or locate? • What is the outlook for employment growth in my state and industry? • What is the average pay for positions like those I employ? • How many jobseekers are available in my area? What are their skills?
Educators, Counselors, Training Providers	• What is the outlook for job opportunities in my area? What's growing? Declining? • What training should I offer to prepare students for current and future jobs? • What training programs do others offer in my area? • What careers offer the best prospects for youth? For adults who are retraining?
Government Policymakers, Planners	• Which industries and occupations need trained workers? • Who make up the unemployed/underemployed? • How do rural and urban economies and workforces differ? • Are persons served by the nation's workforce system finding and maintaining employment?

OPPORTUNITIES FOR IMPROVEMENT

The current workforce and labor market information system consists of the products of many rigorous surveys and data collections, administrative data systems, and analytical resources and tools primarily produced by the U.S. Department of Labor (Bureau of Labor Statistics; Employment and Training Administration), State Labor Market Information Agencies, and the U.S. Department of Commerce (Census Bureau). Existing data and information sources, provided through shared responsibility and funding for the Federal-State labor market information infrastructure, are critical to maintain. Improvements are needed, however, to address key issues concerning data quality, data gaps, data accessibility for end users, data sharing among core producer agencies, and expanding collaboration to include others such as the U.S. Department of Education, National Science Foundation and the Internal Revenue Service.

In the coming months, the Council will thoroughly identify and examine key opportunities for improvement of the workforce and labor market information system and develop recommendations for improving the system for the Secretary of Labor. Based on the Council's initial review, six opportunities for improvement have been identified for further evaluation, each of which is described in the following segments. Additional opportunities may surface as the Council's work moves forward.

OPPORTUNITY #1: ALIGNING EDUCATION AND WORKFORCE TRAINING WITH INDUSTRY NEEDS

IN A RAPIDLY CHANGING ECONOMY, THE SKILL REQUIREMENTS OF BUSINESSES ARE CONSTANTLY EVOLVING. OUR WORKFORCE TRAINING AND EDUCATION PROGRAMS MUST KEEP PACE WITH THE CHANGING REQUIREMENTS IN ORDER TO PREPARE STUDENTS AND WORKERS FOR JOBS IN THE SHORT TERM AND CAREERS IN THE LONG TERM. TO MEET BUSINESS WORKFORCE NEEDS, PROGRAMS MUST HELP CLOSE SKILL GAPS AND ADDRESS MISMATCHES THAT EXIST BETWEEN THE SUPPLY OF AND DEMAND FOR WORKERS.

Examples of Improvement Areas to Examine

Enhance information on the current and future demand for job skills in relation to the supply of skilled workers—Businesses need reliable, consistent current and future skill demand and supply information to facilitate worker recruitment, training, and advancement to support their growth. Educators need the information to adapt workforce training and education programs to evolving workplace requirements. Policymakers need the information to direct scarce government resources to programs that address industry skill/worker shortages in in-demand occupations. Improvements to consider include, for example, more frequent updates of employment projections (currently produced every two years); standardized measures for identifying in-demand occupations; and establishing how best to provide information on the changing composition of employment in the "new economy" in which a substantial number of workers do not have full-time employment with one business.

Leverage Internet-sourced information as a supplement to data developed using recognized statistical standards—Internet-sourced information is a loosely defined set of data generated through Web technologies. One example is the aggregation of information found in job postings and resumes available on websites. Data on labor supply and demand by occupation, industry, geography, and skill and education requirements are used by businesses, individuals, educators, and government agencies to assess the needs of the labor market. All are available through existing government statistical programs using rigorous methods that ensure their validity and reliability, but require processing time that does not allow the data to be generated with the frequency and currency of data compiled from Internet sources. Issues to examine with respect to information obtained from the Internet include the quality of Internet-based sources in terms of breadth, depth, and reliability; how best to use such data to supplement traditional labor market information; and what the government can do to make job postings data more accessible for labor market information use through establishment of open data architecture standards.

OPPORTUNITY #2: INFORMING CAREER DECISIONS OF STUDENTS AND WORKERS

STUDENTS, JOBSEEKERS AND WORKERS OF ALL AGES ARE CONSTANTLY MAKING DECISIONS ABOUT THEIR CAREERS—IDENTIFYING CAREER INTERESTS AND GOALS, PLANNING AN EDUCATION AND TRAINING PATHWAY TO ACHIEVE THOSE GOALS, AND RE-EVALUATING CAREER PATHS AND ENGAGING IN RE-TRAINING AS INDUSTRY SKILL NEEDS EVOLVE IN OUR RAPIDLY CHANGING ECONOMY. UNINFORMED DECISIONS HAVE GREAT COSTS TO INDIVIDUALS, BUSINESSES, GOVERNMENT, THE ECONOMY, AND SOCIETY AT LARGE.

Examples of Improvement Areas to Examine

Produce more current updates of information about required job skills—Students, jobseekers and workers need up-to-date information on required job skills for specific occupations. O*NET provides the best resource for detailed descriptions of the knowledge, skills, abilities, work-related tasks, and tools and technologies used by specific occupations (974 occupations are covered). The occupational information in O*NET is currently updated via a survey of workers and businesses for 100 occupations each year. Although some occupations and other O*NET data are updated more frequently, the entire database is completely refreshed only once over a period of 10 years. Given the rapidly changing nature of work, how to provide more frequent updates needs to be examined.

Improve information on occupational licenses required for specific jobs—Post-secondary credentials have become an increasingly important factor for students and workers making career choices in relationship to business hiring decisions. Efforts have been made to maintain a comprehensive resource of industry and trade association certifications associated with occupations. Information on state occupational licenses also needs to be kept up to date. A reliable source of state occupational licensing requirements is an important labor market resource for students, workers, and the educators assisting them in their career development.

Improve information on the success of participants in workforce training and education programs—Administrative data systems of the U.S. Departments of Labor and Education provide high-level data on program enrollee completion and placement rates, including employment rates. However, data that align specific program completions with specific jobs obtained as a result thereof is not available for most programs. Knowing which programs are more successful in helping students and workers obtain and succeed in the jobs they were trained for would help improve consumer choice and lead to a more effective workforce system.

OPPORTUNITY #3: DETERMINING THE EFFECTIVENESS OF WORKFORCE TRAINING AND EDUCATION PROGRAMS

EACH YEAR, FEDERAL AND STATE GOVERNMENTS SPEND SIGNIFICANT FUNDS ON WORKFORCE TRAINING AND EDUCATION PROGRAMS TO ASSIST INDIVIDUALS IN OBTAINING EMPLOYMENT AND LAUNCHING CAREERS. THE EMPLOYMENT OUTCOMES OF WORKFORCE PROGRAM PARTICIPANTS ARE CURRENTLY ROUTINELY LIMITED TO ONE YEAR FOLLOWING PROGRAM EXIT. FURTHER, THESE SYSTEMS IDENTIFY HOW MANY PROGRAM COMPLETERS ARE PLACED IN JOBS AND AT WHAT WAGE, BUT THEY DO NOT PROVIDE INFORMATION ON WHETHER THE JOBS MATCHED THEIR EDUCATION OR TRAINING PREPARATION, HOW LONG THEY HELD EMPLOYMENT, AND THE EXTENT TO WHICH THEIR WAGES ROSE OVER TIME, ALL OF WHICH ARE IMPORTANT TO DETERMINING PROGRAM EFFECTIVENESS.

Examples of Improvement Areas to Examine

Expand information about workforce training and education program completers—Workforce development planners and policymakers need more information on program completers over a longer period of time to better determine program effectiveness. Continued development and support of systems that connect workforce training and education program participants to employment outcomes is needed. The U.S. Department of Labor's Workforce Data Quality Initiative grant program and the U.S. Department of Education's Statewide Longitudinal Data Systems grant program have begun to address this need. How to institute a common, standard approach to identifying program effectiveness needs to be examined.

Provide more detailed information on the qualitative characteristics of jobs, including wages, benefits, job security and work-life balance—Workers naturally seek employment that provides economic security and supports a high quality of life during employment and in retirement. When there are sufficient job opportunities in multiple occupations or industries, these factors could have a measurable impact on employment outcomes after training. An examination of how best to augment current data on job quality is needed to help understand its impact on aligning training and education to fill workforce shortages and to better inform businesses competing for qualified workers in the local labor market.

Determine why program completers do not enter jobs or career paths for which they were trained—Government planners and policymakers focus funding of specific workforce training and education programs to meet industry skill shortages. When completers do not enter occupations or industries for which there are worker shortages, knowing why—potentially including the factors addressed above—becomes paramount to determining program effectiveness and better targeting of resources. How best to develop accurate, reliable, and standardized information on why and how this happens is important to examine.

OPPORTUNITY #4: UNDERSTANDING THE CHARACTERISTICS OF THE WORKFORCE

INFORMATION ON THE CHARACTERISTICS OF THE WORKFORCE CAN HELP BUSINESSES MAKE LOCATION AND HIRING DECISIONS. LIKEWISE, SUCH INFORMATION CAN HELP FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCIES MORE EFFECTIVELY DIRECT NEW WORKFORCE DEVELOPMENT PROGRAMS. HOWEVER, THE DATA AVAILABLE DO NOT PROVIDE SUFFICIENT LOCAL OCCUPATIONAL DEMAND AND SUPPLY INFORMATION TO IDENTIFY LOCALLY RELEVANT SKILL SURPLUSES AND SHORTAGES. IN ADDITION, THERE IS A "NEW ECONOMY WORKFORCE" EMERGING, WITH ALTERNATIVE WORK ARRANGEMENTS INVOLVING LESS THAN FULL-TIME EMPLOYMENT, FOR WHICH THERE IS VERY LITTLE ACCURATE AND RELIABLE DATA TO GAUGE THE FULL IMPACT.

Examples of Improvement Areas to Examine

Provide more detailed, localized information on the workforce for workforce development planning—It is often reported that skills gaps exist; however, the narrative is too general for workforce development policymakers and planners to make well-informed decisions. Important workforce characteristics for which more details are needed include, for example, the skills and experience of the workforce in a specific geographic area; the number, demographics, prior work experience, and barriers to employment of the unemployed and underemployed; and the number and qualifications of new entrants to the workforce from education and training programs. Data gaps need to be addressed, especially the lack of sufficiently localized occupational information to identify specific skill shortages. For example, accurate and reliable local level data on the employed—their occupations, work hours, physical location of the work, and wages—could be obtained through expanding data elements on the quarterly reports submitted by employers under the Unemployment Insurance program. This has raised business concerns about the reporting burden and costs relative to the value of the information that would be gained. However, it is a key area that needs to be examined in collaboration with business, the Employment and Training Administration, and State Unemployment Insurance agencies.

Improve information on local workforce characteristics important to businesses—Businesses need to know the size, knowledge, skills, education and training, and availability of the workforce supply in their current locales and in areas where they may seek to expand or re-locate. Currently available public data at the national and state-level helps to answer some of these questions; however, missing are data for the local labor market from which a business draws the talent it needs. Further, the alignment of workforce supply data with commuting data—important to business decisions—is currently not available. How the government should collect and make available the kinds of local level data needed by businesses must be thoroughly examined. These business information needs could be addressed, for example, by expanding the O*NET and/or Occupational Employment Statistics (OES) data collections to address local level data needs, and obtaining additional data directly from businesses through the Unemployment Insurance program as noted above.

Produce information on the changing structure of work in the economy—A "new economy workforce" is emerging about which there is very little accurate and reliable data. By some estimates, more than one-third of the current workforce is not engaged in a full-time, employer-employee relationship.* Rather, they are employed in alternative work arrangements such as contract work, multiple part-time jobs, and temporary work. Of particular importance for ensuring that policymakers understand the trends in the economy, the nation needs a way to define, measure, and assess the impact of these new job arrangements. Information that is needed includes, for example, who and how many are so employed; what is the exact nature of these employment relationships; and what is the impact on total compensation, including benefits, healthcare, and retirement.

* U.S, Government Accountability Office, Contingent Workforce: Size, Characteristics, Earnings, and Benefits, April 20, 2015 (GAO-15-168R).

OPPORTUNITY #5: MAKING WORKFORCE AND LABOR MARKET INFORMATION MORE ACCESSIBLE AND RELEVANT TO END USERS

THERE ARE A MYRIAD OF WORKFORCE AND LABOR MARKET INFORMATION RESOURCES AVAILABLE FOR PUBLIC USE—SO MUCH SO THAT IT IS OFTEN CONFUSING TO END USERS WHAT SOURCES TO USE. OVER THE YEARS, MUCH HAS BEEN DONE TO IMPROVE THE END USER EXPERIENCE. HOWEVER, TECHNOLOGY ADVANCEMENTS ARE CONTINUOUSLY CHANGING HOW PEOPLE ACCESS AND USE INFORMATION. CONTINUOUS EFFORTS NEED TO BE MADE BY STATISTICAL AGENCIES TO MAKE WORKFORCE AND LABOR MARKET INFORMATION EASIER TO ACCESS, UNDERSTAND, AND USE BY IMPLEMENTING THESE NEW AND EVOLVING TECHNOLOGIES AND TOOLS. ADVANCES IN WORKFORCE AND LABOR MARKET INFORMATION DELIVERY SYSTEMS WILL PROVIDE FOR BETTER INFORMED DECISIONS BY BUSINESSES AND INDIVIDUALS ACROSS THE NATION.

Examples of Improvement Areas to Examine

Create an integrated set of information resources that addresses local workforce needs nationwide—All end users of the workforce system—businesses, workers, jobseekers, students and educators—need access to data that is relevant to their particular needs. Government policymakers and staff who are not experienced in the use of these sources would also benefit from improvements in data accessibility to meet their needs. We must examine the feasibility of creating a common, integrated set of workforce and labor market information resources nationwide with the capacity to address local workforce needs.

Use technology to improve data access and the user experience—All end users would benefit from the use of new and evolving technologies and tools. Developing user interfaces tailored to specific user needs, innovative search capabilities, and new products such as mobile applications and infographic visualizations are examples of the kinds of improvements to be considered. How best to design and implement these types of improvements on a nationwide basis needs to be examined.

OPPORTUNITY #6: ENHANCING GOVERNMENT DATA SHARING, COLLABORATION, AND FUNDING AMONG STATISTICAL AGENCIES

FEDERAL AND STATE STATISTICAL AGENCIES FOCUS SUBSTANTIAL EFFORTS ON THE PRODUCTION OF TIMELY, HIGH-QUALITY DATA, BUT OFTEN ENCOUNTER OBSTACLES INHIBITING EFFORTS TO COORDINATE, SHARE, OR SYNCHRONIZE THEIR DATA DEVELOPMENT EFFORTS. IN ADDITION TO PROVIDING FUNDING TO MAINTAIN THESE CRITICAL PROGRAMS AND TO SUPPORT THE NEED FOR SIGNIFICANT QUALITY IMPROVEMENTS, WAYS TO ENHANCE COLLABORATION IS INCREASINGLY IMPORTANT.

Examples of Improvement Areas to Examine

Improve coordination and collaboration among statistical agencies—Workforce and labor market information is produced primarily by the U.S. Department of Labor, State Labor Market Information Agencies, and the U.S. Census Bureau. Additionally, there are other relevant data produced by agencies such as the U.S. Department of Education (National Center for Education Statistics), the U.S. Department of Treasury (Internal Revenue Service), the Equal Employment Opportunity Commission, and the National Science Foundation. To date, the Council has heard from several agencies on existing collections and improvements currently underway. A key area for the Council's work going forward will be to identify all current improvement efforts and examine ways to expand coordination and collaboration. Three critical areas to examine include: data synchronization between the Bureau of Labor Statistics, the Census Bureau, and the Internal Revenue Service; enhancement and use of administrative records for statistical purposes; and improving connections between workforce and education data important to identifying workforce program outcomes for program effectiveness evaluation and career planning purposes.

Eliminate laws or regulations that impede information sharing—A number of laws or regulations impede data sharing between and among statistical agencies at the individual record level. Key examples include the Family Educational Rights and Privacy Act and Federal and State Unemployment Insurance program laws. An examination of the issues is needed to determine what can be done to permit the sharing of data for the valuable information it can provide while ensuring the protection of the confidentiality and privacy of the data.

Ensure funding to maintain and improve workforce and labor market information—Within the U.S. Department of Labor, for many years there has been flat or declining funding for the collection, analysis, and dissemination of workforce and labor market information. This has particularly impacted the availability and reliability of local workforce data, and the analytical and labor market information support services available to users at the local level. Cost-efficient improvements, leveraging and flexible use of federal resources, and coordination and data sharing need to be explored. However, without attention to the funding provided, there will be a further degradation of the quantity and quality of information available on which businesses, workers, and the overall economy depend.

WORKFORCE INFORMATION ADVISORY COUNCIL

Name	Organization	Representing Entity
Pamela Bucy	Montana Department of Labor and Industry	State Agency Representative (Workforce)
Aaron Fichtner	New Jersey Department of Labor and Workforce Development	State Agency Representative (Workforce)
Ellen Golombek	Colorado Department of Labor and Employment	State Agency Representative (Workforce)
Bruce Madson	Ohio Department of Job and Family Services	State Agency Representative (Workforce)
Mathew Barewicz	Vermont Department of Labor	LMI Director
Cynthia Forland	Washington State Employment Security Department	LMI Director
Brenda Lisbon	South Carolina Department of Employment and Workforce	LMI Director
Graham Slater*	Oregon Employment Department	LMI Director
Angela Pate	University of Florida Startup Quest, OwnForce, Inc.	Provider of Training Service
Jennifer Zeller	Georgia Power, Community and Economic Development	Economic Development Entity
Mark McKeen	General Motors	National Business or Trade Organization
Chelsea Orvella	Society of Professional Engineering Employees in Aerospace, IFPTE Local 2001	National Labor Federation
Bruce Ferguson	CareerSource of Northeast Florida	Workforce Development Board
Andrew Reamer	George Washington Institute of Public Policy	Research Entity

*Former Chair. Resigned due to new position in January 2017.