The foundation of the Common Ground work was established through a six-month project undertaken in October 2005. With the support of the Robert Wood Johnson Foundation, the Institute worked with the National Association of County and City Health Officials (NACCHO) on a collaboration to define local health department business processes, identify how those processes could be improved for greater effectiveness and efficiency, and use the resulting understanding of the improved processes to describe how an information system should support the agency’s work.

The Process of Collaboration

Through Common Ground, the Institute brought together a group of state and local health agencies to work together to:

- Collaboratively think through the tasks that are performed to meet specific public health objectives (analyze their business processes);
- Rethink the underlying tasks to increase effectiveness and efficiency (redesign business processes); and
- Describe what the information system must do to support the performance of those tasks (define system requirements).

The project produced comprehensive documentation of the business processes and information system requirements for chronic disease management and public health preparedness, and helped clarify the information system needs for public health’s active involvement in the emerging e-health community.
In the 21st century, two significant driving forces will dramatically change the public health landscape: the American Recovery and Reinvestment Act (ARRA) and the Prevention and Public Investment Health Fund. The convergence of these forces represents an unprecedented level of federal spending to improve health outcomes for Americans.

The Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (the Institute) in a national initiative called Common Ground, Uncommon Communication. Recognizing the growing need to help public health agencies develop a cohesive enterprise, the Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (the Institute) in a national initiative called Common Ground, Uncommon Communication. Through this initiative, the Institute led the collaborative development of requirements for information systems that would improve public health preparedness—the ability to respond to public health threats such as infectious diseases, pandemics and terrorism—and management of chronic diseases, such as obesity, diabetes and asthma. The Institute served as the program manager for the Health Information Technology (HIT) program, which is designed to provide for an expanded and sustained national investment in prevention, wellness and public health action. Both initiatives provide an historic opportunity for public health to align its priorities and practices with healthcare reform efforts in the US.

In order to be effective partners in this new e-health era, public health will need to perform on a scale never seen across any jurisdiction. Public health agencies at all levels of government must be able to plan and act effectively, much as they do in public health goals and policies, and focus on the improved performance of the public health system as an enterprise in order to meaningfully link to their public agencies, and exchange information with one another. The Institute serves as the National Program Office for the initiative, tracking progress, public health information policies and methods, providing technical assistance, and guiding grantees through methodologies for collaboratively defining a common set of information system requirements.

The goals of Common Ground were to:

- Persuade public health agencies to integrate information principles and sound development methodologies to improve the delivery of public health services
- Create public health agencies’ existing business processes and define requirements for the information systems used to support these processes
- Help agencies develop new information system requirements that are more effective and that streamline the delivery of essential public health services
- Minimize duplication of efforts by identifying common business processes and information system requirements that are applicable across the public health field
- Encourage stakeholders at all levels, state, and federal levels to engage, adopt, and implement redesigned business processes and information system requirements that support public health preparedness and chronic disease prevention and control

In order to address these goals, the Institute employed its Collaborative Requirements Development Methodology—an innovative and cost-effective approach to assisting public health agencies with their information system needs.

Common Ground, Recognizing the growing need to help public health agencies develop a cohesive enterprise, the Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (the Institute) in a national initiative called Common Ground.

Using the Institute’s methodology and BPA tools often provided a “aha” moment in which it became clear that new assumptions about the way in which a process occurred were significantly at odds with what was actually happening. Ultimately, the method of documenting their processes facilitated a clearer and more accurate understanding of the work being performed. This clarity was essential to defining requirements for information systems that would effectively support the work of the agencies, as well as provide the transparency needed for participation in health information exchange with other agencies and healthcare providers.

Common Ground, Collaborative Requirements Development Methodology

Collaborative Requirements Development Methodology

Providing the BPA process, the participants looked back at processes that were not working as well as they could, or were inefficient, or were outdated; that is, processes that were accomplishing the right things, but needed to do so more effectively and efficiently. Participants were asked to consider the proposed redesign in terms of feasibility and likelihood of success and positive impact. Based on these guidelines and armed with the Institute’s methodology for Business Process Redesign (BPR), the groups worked collaboratively to redesign several key processes.

Business Process Analysis

At the outset of the project, the Institute introduced grantees to the tools and methodologies for performing a Business Process Analysis (BPA). They also provided the participants with initial and final flow diagrams, highlighting its graphical depiction of business processes, and with the Business Process Matrix, a textual description tool. Grantees used these analysis tools to create a public health information system.

- What participants in the process;
- What types of information are exchanged between participants in the process; and
- How the work is accomplished.

Through the Requirements Definition phase of the Common Ground program, participants explored the importance of defining information system requirements, in terms of content and timing, in the context of implementing expansive work system design and development. They learned to clearly define what the organization needs and wants from the information systems that support the activities within their business processes—to answer the question “How can an information system effectively and efficiently support our work?” Specifically, they:

- Defined the tasks to be performed for optimized business processes;
- Described the implementation of business rules;
- In words and graphics how an information system must be structured; and
- Determined the scope of the next phase of activities.

Participants learned that a good information system requirement is clear, concise and measurable. They used the Task Flow diagrams from that RAMP’s work to identify activities that were not ideal, and created new information system requirements to address the requirements for improved work processes, and ultimately identified improvements. In the end, the grantees collaboratively developed and documented detailed requirements for a number of common chronic disease management and preparedness processes.

Business Process Redesign

Having completed the BPA process, the participants looked back at processes that were not working as well as they could, or were inefficient, or were outdated; that is, processes that were accomplishing the right things, but needed to do so more effectively and efficiently. Participants were asked to consider the proposed redesign in terms of feasibility and likelihood of success and positive impact. Based on these guidelines and armed with the Institute’s methodology for Business Process Redesign (BPR), the groups worked collaboratively to redesign several key processes.

Collaborative Requirements Development Methodology

This approach enabled the Common Ground grantees to reach agreement on and begin to use common vocabulary and definitions to describe their business processes, and provided guidelines for the different agencies to review and learn from each other’s approaches for carrying out core business activities. This process will continue until communities collaborated to decide to collectively go and articulate a clear picture of how information systems should support their work. Perhaps more importantly, it communicated a working vision of public health nationwide, a critical perspective for integrating public health into the overall e-health system.

Requirements Definition

The Collaborative Requirements Definition phase of the Common Ground program, participants explored the importance of defining information system requirements, in terms of content and timing, in the context of implementing expansive work system design and development. They learned to clearly define what the organization needs and wants from the information systems that support the activities within their business processes—to answer the question “How can an information system effectively and efficiently support our work?” Specifically, they:

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About the Public Health Informatics Institute

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The Process of Collaboration

Through Common Ground, the Institute brought together a group of state and local health agencies to work together to:

- Collaboratively think through the tasks that are performed to meet specific public health objectives (describe their business processes);
- Rethink the underlying tasks to increase effectiveness and efficiency (redesign business processes); and
- Describe what the information system must do to support the performance of the improved tasks (define system requirements).

The project produced a comprehensive documentation of the business processes and information system requirements for chronic disease management and public health preparedness, and helped clarify the information system needs for public health’s active involvement in the emerging e-health community.
In the 21st century, two significant driving forces will dramatically change the public health landscape: the American Recovery and Reinvestment Act (ARRA) and the Prevention and Public Health Fund. The convergence of these forces represents an unprecedented level of public spending to improve health outcomes for Americans.

The Public Health Informatics Institute (PHII), through PHII, the Preventive Health Information Technology for Economic and Clinical Health (PHEITC) Act, is dedicated to stimulating health IT adoption, meaningful use of electronic health records, and health information exchange, with the overall goal of improving the health and care of Americans—effectively, cost-effectively, and ethically. This initiative has the potential to change the way public health collects, manages, and analyzes data that is critical to supporting decisions on public health services and policies. The Preventer and Public Health Investment Fund is designed to provide a means for expanded and sustained national investment in prevention, wellness and public health action. Both initiatives provide an historic opportunity for public health to align its vision and priorities with healthcare reform efforts in the US.

In order to be effective partners in this new health era, public health will need to perform in a cross-sectoral fashion across political jurisdictions. Public health agencies at all levels of government must be able to plan effectively, meet common public health goals and priorities, and focus on the improved performance of the public health system as an enterprise in order to successfully link to their private healthcare partners. This necessitates a common understanding of the work of public health and what information systems must do to support this work, and requires the implementation of interoperable information systems across public health, linking to healthcare.

**Common Ground**

Recognizing the growing need to help public health agencies develop a cohesive enterprise, the Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (The Institute) in a national initiative called Common Ground. Through this initiative, the Institute led the collaborative development of requirements for information systems that would improve public health performance—the ability to respond to public health threats such as infectious diseases, pandemics and bioterrorism — and management of chronic diseases, such as obesity, diabetes and asthma. The Institute served as the National Program Office for the initiative, teaching grantees public health informatics principles and methods, providing technical assistance, and guiding grantees through the methodology for collaboratively defining common information systems requirements.

**The Goals of Common Ground were to**

- Persuade public health agencies to integrate information technologies and sound development methodologies to improve the delivery of public health services
- Create a public health agency’s existing business processes and define requirements for the information systems used to support these processes
- Help agencies develop new information system requirements that are more effective and that streamline the delivery of essential public health services
- Mobilize cooperative efforts by identifying common business processes and information system requirements that are applicable across the public health domain
- Encourage stakeholders at all levels, local, state, and federal levels to adopt, adapt, and implement redesigned business processes and information system requirements that support public health preparedness and chronic disease prevention and control.

In order to address these goals, the Institute employed its Collaborative Requirements Development Methodology—a coherent and cost-effective approach to assisting public health agencies with their information system needs.

**Business Process Analysis**

At the outset of the project, the Institute introduced grantees to the tools and methodologies for performing a Business Process Analysis (BPA). This involved familiarizing grantees with Context and Task Flow diagrams, familiarizing them with graphic depiction of business processes, and with the Business Process Matrix, a textual description tool. Grantees used these analysis tools to create a public health

- **What participants in the process;**
- **What types of information are exchanged between participants in the process; and**
- **How the work is accomplished.**

Using the Institute’s methodology and BPA tools often provided “aha” moments in which it became clear that some assumptions about the way in which a process occurred were significantly at odds with actual practice. Ultimately, the method of documenting their processes facilitated a clearer and more accurate understanding of the work being performed. This clarity was essential to defining requirements for information systems that would effectively support the work of the agencies, as well as provide the interoperability needed for participation in health information exchange with other agencies and healthcare providers.

**Business Process Redesign**

Having completed the BPA process, the participants looked for processes that were not working as well as they could or were inefficient, or were outdated. That is, processes that were accomplishing the right things, but were doing so in a less effective and efficient manner. Participants were asked to examine the potential range of factors that influenced the functionality and body of work undertaken. This was a positive impact. Based on these guidelines and armed with the Institute’s methodology for Business Process Redesign (BPR), the groups worked collaboratively to redesign several key processes.

**Requirements Definition**

Through the Requirements Definition phase of the Common Ground program, participants explored the importance of defining information system requirements, in terms of operating and maintaining the time-consuming, expansive work of system design and development. They learned to clearly define what the organization needs and wants from the information systems that support the activities within its business processes—to answer the question: How can an information system effectively and efficiently support our work? Specifically, they:

- Defined the tasks to be performed for optimized business processes;
- Described the implementation of business rules;
- Created and validated information system requirements; and
- Determined the scope of the next phase of activities.

Participants learned that a good information system requirement is clear, concise and measurable. They used the Task Flow diagrams from that BPA process to identify activities that were or could be supported by an information system, uncover the requirements for supporting them, and identify the information system requirements identified. In the end, the grantees collaboratively developed and documented detailed requirements for a number of common chronic disease management and prevention processes.

**About the Public Health Informatics Institute**

The Public Health Informatics Institute is a non-profit organization. The Institute is composed of professionals in the areas of public health, healthcare information systems, and communications—all well versed in the current and emerging issues in public health. The Institute is dedicated to being an expert as a normal consumer of public health professionals and their stakeholders, transforming health practitioners’ ability to apply information effectively in order to improve health outcomes worldwide.
In the 21st century, two significant driving forces will dramatically change the public health landscape: the American Recovery and Reinvestment Act (ARRA) and the Preventive and Public Health Investment Fund. The convergence of these forces represents an unprecedented level of federal funding to improve health outcomes for Americans.

Foundation engaged in a national initiative called Common Ground

Recognizing the growing need to help public health agencies develop a cohesive enterprise, the Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (the Institute) in a national initiative called Common Ground. This initiative led the collaborative development of requirements for information systems that would improve public health preparedness — the ability to respond to public health threats such as infectious diseases, pandemics and bioterrorism — and management of chronic diseases, such as obesity, diabetes and asthma. The Institute served as the National Program Office for the initiative, teaching grantees public health informatics principles and methods, providing technical assistance, and guiding grantees through a methodology for collaboratively defining common requirements across public health agencies as an enterprise in order to electronically link to their private healthcare providers. This initiative’s common understanding of the work of public health and what information systems must do to support this work, and requires the implementation of interoperable information systems across public health, leading to healthcare.

Common Ground

Recognizing the growing need to help public health agencies develop a cohesive enterprise, the Robert Wood Johnson Foundation engaged the Public Health Informatics Institute (the Institute) in a national initiative called Common Ground. Through this initiative, the Institute led the collaborative development of requirements for information systems that would improve public health preparedness — the ability to respond to public health threats such as infectious diseases, pandemics and bioterrorism — and management of chronic diseases, such as obesity, diabetes and asthma. The Institute served as the National Program Office for the initiative, teaching grantees public health informatics principles and methods, providing technical assistance, and guiding grantees through a methodology for collaboratively defining common requirements across public health agencies as an enterprise in order to electronically link to their private healthcare providers. This initiative’s common understanding of the work of public health and what information systems must do to support this work, and requires the implementation of interoperable information systems across public health, leading to healthcare.

The goals of Common Ground were to:

• Provide public health agencies to integrate information technologies and sound development methodologies in order to deliver the public health services; and
• Create a public health enterprise: existing business processes and define requirements for the information systems to support these processes; and
• Help agencies develop new information system requirements that are more effective and that streamline the delivery of essential public health services; and
• Minimize duplicative efforts by identifying common business processes and information system requirements that are duplicated across the public health field; and
• Encourage stakeholder at the local, state, and federal levels to evolve, adopt, and implement redesigned business processes and information system requirements that support public health preparedness and chronic disease prevention and control.

In order to address these goals, the Institute employed its Collaborative Requirements Development Methodology — a coherent and cost-effective approach to assisting public health agencies with their information systems needs.

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Business Process Analysis

At the outset of the project, the Institute introduced grantees to the tools and methodologies for performing a business Process Analysis (BPA). They taught them how to identify and map their current enterprise models and, following the methodology, led them through a pilot Business Process Analysis (BPA) session. This pilot effort resulted in the development of a framework for future analyses between the Institute and the grantees. The goal of this framework was to provide a common understanding of the work of public health and what information systems must do to support this work, and requires the implementation of interoperable information systems across public health, leading to healthcare.

Business Process Redesign

Having completed the BPA process, the participants looked for processes that were not working as well as they should and/or were inefficient, or were outdated; that is, processes that were accomplishing the right things, but needed to do so more effectively and efficiently. Participants were asked to identify the processes in need of refinement and to document the benefits of process improvements. A positive impact. Based on these guidelines and armed with the Institute’s methodology for Business Process Redesign (BPR), the groups worked collaboratively to redesign several key processes.

Requirements Definition

Through the Requirements Definition phase of the Common Ground program, participants explored the importance of defining information system requirements, in terms of containing and transforming the time-consuming, expensive work of system design and development. They learned to clearly define what the organization needs and wants from the information systems that support the activities within their business processes; to answer the question: ‘How can an information system effectively and efficiently support our work?’ Specifically, they:

• Defined the tasks to be performed for optimal business processes;
• Described the implementation of business rules;
• Described in words and graphics how an information system must be structured; and
• Determined the scope of the next phase of activities.

Participants learned that a good information system requirement is clear, concise and measurable. They used the Task Flow diagrams from their BPA efforts to identify activities that are not correctly supported by an information system. A successful implementation of the requirements for supporting these tasks resulted in redesigned work processes. In the end, the grantees collaboratively developed and documented detailed requirements for a number of common chronic disease management and preparedness processes.

Common Ground, Uncommon Communication

The collaboration approach realized the Common Ground grantee’s reach out and then use common vocabulary and definitions to describe their business processes, and provided guidelines for the different agencies to review and learn from each other’s efforts for carrying out site business activities. The Institute’s methodology has enabled participating agencies to collectively gain and articulate a clear picture of how information systems should support their work. Perhaps more important, it communicated a verifying presence of public health nationwide, a critical perspective for integrating public health into the overall e-health system.

About the Public Health Informatics Institute

The Public Health Informatics Institute is a leader in the field of public health informatics (PHI). Our staff is comprised of professionals in the areas of public health, healthcare information systems and communications — all well-versed in the current and emerging issues of public health and health information technology to provide clients with the expertise as an expert consultant of public health professionals and team members — transforming healthcare/public health ability to apply information effectively in order to improve health outcomes worldwide. The Public Health Informatics Institute is a leader in the field of public health informatics (PHI). Our staff is comprised of professionals in the areas of public health, healthcare information systems and communications — all well-versed in the current and emerging issues of public health and health information technology to provide clients with the expertise as an expert consultant of public health professionals and team members — transforming healthcare/public health ability to apply information effectively in order to improve health outcomes worldwide.
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The process of collaboration included:
- Collaboratively think through the tasks that are performed to meet specific public health objectives (analyze their business processes);
- Rethink the underlying tasks to increase effectiveness and efficiency (redesign business processes); and
- Describe what the information system must do to support the performance of those tasks (define system requirements).

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Collaborative Requirements Development Methodology for Public Health Information Systems

Seeing New Opportunities

Finding Common Ground

Collaborative Requirements Development for Public Health Information Systems

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