



# **Measuring Business Impact: Lessons Learned from Workforce Development in Massachusetts**

By Lisa Soricone and Navjeet Singh  
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Commonwealth Corporation strengthens the skills of youth and adults so that they can thrive in the Massachusetts economy. By building their skills, we help businesses meet their workforce needs. We seed innovative solutions in response to critical labor market challenges through partnerships with industry, education and workforce organizations. Commonwealth Corporation is a Massachusetts quasi-public corporation within the Executive Office of Labor and Workforce Development.

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Industry sector-based workforce development projects are intended to offer benefits both to individuals who participate in education and training activities and to employers. In Massachusetts, the Workforce Competitiveness Trust Fund (WCTF), launched in 2007, is aimed at achieving two such goals:

- To improve the competitive stature of Massachusetts businesses by improving the skills of current and future workers, and
- To improve access to well-paying jobs and long-term career success for all residents of Massachusetts, especially those who experience structural, social, and educational barriers to employment success.

Typically, the success of initiatives like the WCTF is measured by the outcomes achieved for individuals who are participating in education and training activities. Commonwealth Corporation, a quasi-public workforce development agency that administers the WCTF and other workforce development projects, set out to document not only individual outcomes, such as wage gains and job placements, but also the impact of the WCTF on the participating employer organizations. Commonwealth Corporation's aim in promoting the measurement of business impact among the 31 WCTF projects was first, to provide employers and other stakeholders greater insight into the value of workforce development interventions for the employers involved in them, and second, to develop tools and expertise to support future projects in measuring business impact. Put simply, we sought to answer the question: "How do we know our projects are successful for employers?" By supporting projects and observing their work in the area of measuring business impact, Commonwealth Corporation hopes to foster better alignment between program design and business goals.



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## OUR APPROACH

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The end of the first round of the WCTF (which ran from June 2007 through May 2010) presents an opportunity to reflect on both the business impact of the projects, as well as the process used to support projects and gather these insights.

Commonwealth Corporation introduced the idea of measuring business impact by requiring projects at the proposal stage to identify employer goals and to enumerate anticipated business impacts of each project. Once projects were underway, we turned to project coordinators, who do the on-the-ground management, to carry out the actual work of measuring business impact. To help coordinators understand the concept of business impact, Commonwealth Corporation framed it as one element of answering the overarching question, "How do we know our projects are successful?" – not just for education and training participants, but for employers as well.



To further clarify the concept we presented business impact as kind of a continuum. On one end of that continuum are the “good stories” of employees who take part in training and, as a result, exhibit greater confidence and better performance on the job. At the other end, is Return on Investment (ROI), which requires rigorous calculation of the dollar value of inputs to, and benefits of, training. We aimed to move beyond anecdotes about enhanced performance of workers to a more systematic examination of the benefits of workforce development interventions for the participating businesses.

How do we know our projects are successful for employers?

To launch projects in this effort, Commonwealth Corporation provided projects with a *Getting Started* document, a tool for identifying and tracking employer outcomes.<sup>1</sup> *Getting Started* offered a set of questions to allow projects to consider the overall goals of the project and develop a set of relevant and realistic business impact measures within the context of achieving those goals. In addition, Commonwealth Corporation provided each project with a staff contact as an evaluation resource to support the process of measuring business impact over the life of the project. Through an initial phone call, the evaluation resource and project staff established mutual understanding of project business impact goals, discussed potential business impact measures, identified potential challenges and outlined an initial plan for data collection. The evaluation resource remained available for consultation and technical assistance (which most often took the form of planning and survey review) during the project. Commonwealth Corporation staff stayed abreast of business impact activities through projects’ regular quarterly narrative reporting and review processes conducted as part of standard program management. To further enhance our understanding of the process of measuring business impact, we conducted case studies to get an “on the ground” view of the challenges and opportunities associated with measuring business impact.

## METHODS

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Armed with an initial plan for measuring business impact, projects set out to gather and report on data. In most cases, projects gathered information by conducting surveys of their employer partners (usually supervisors of training participants) and through discussion and reports at partnership meetings. In one instance, a project was supported by the Massachusetts Manufacturing Extension Partnership (MassMEP), which administered a nationally recognized survey to the project’s employers.<sup>2</sup> To enhance our own understanding of the business impact measurement process, Commonwealth Corporation staff conducted case studies at two manufacturing firms. Some sectors, such as manufacturing, provided easier contexts for a more formal measurement and quantification of results, since in many instances, employers already collected some type of performance or operational data which could contribute to the process. To assist in the gathering of information on business impact, project coordinators enlisted the help of a range of individuals within their partner employers. These included CEOs, human resources staff, managers and supervisors.

The business impact results collected for WCTF projects are presented in Appendix A.

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<sup>1</sup> Available at <http://www.commcorp.org/resources/detail.cfm?ID=872>

<sup>2</sup> National Institute of Standards and Technology (NIST) Survey, January 2009.



## CHALLENGES TO MEASURING BUSINESS IMPACT

**Capacity** – Engaging in the process of measuring business impact proved to be uncharted waters for projects that typically focus attention on the education and training outcomes/benefits for individual participants. Measuring business impact required a new way of approaching and understanding projects – both for coordinators and the range of partner organizations involved. The process demanded research and analysis techniques (e.g., survey development and data review) with which most project coordinators were neither familiar nor comfortable. This limited the rigor with which projects were able to undertake business impact measurement. In their efforts to measure business impact, project coordinators had to engage with employers around defining business needs, identifying appropriate measures, gaining access to data and responding to reporting timelines. This demanded additional time and energy on the part of coordinators and employers beyond their initial expectations. The process of measuring business impact ultimately proved to be a good indicator of the level of employer engagement in the project at various stages from defining needs and goals to actually measuring the effectiveness of the intervention. More engaged employers provided support for data collection, and they found value in seeing the results of the business impact measurement process.

**Diversity of models** – Projects ranged in industry sector focus, in size -- in terms of both employer numbers and participants served -- as well as in their orientation to serving incumbent, un- or under-employed workers, or a combination of all three. This diversity meant that there was not a one-size-fits-all set of business impact measures, surveys and approaches that projects could apply. Rather, we had to draw on the resources of Commonwealth Corporation staff and the dedication of project coordinators to develop tools appropriate for the context of each project. The impact we would hope to see in a project focused on building a worker pipeline would be much different than that we would anticipate in a project that trained fewer than 5 employees in a large organization, which would differ from the results expected for a project offering lean manufacturing skills training to a significant portion of an organization's workforce. Cases in which participants were distributed in small numbers across a large number of employers posed a particular challenge as it was more difficult to discern an organizational impact of a training intervention beyond changes in individual worker performance.

**Availability of data** – The extent to which employers were already using their own internal measures that examined organizational impact or could be adapted to do so also varied tremendously, with some institutions, such as large hospitals and manufacturers working in the defense and aerospace sectors, having quality human resource and other data from which to draw, and small businesses having no existing formal data to access. Employers, especially small ones, often lack the capacity to measure or the culture to operate on the basis of specific measures. In such cases the burden of determining appropriate measures fell to the project coordinator, who, in the best of cases, determined these measures through a process involving employers and other members of the project partnership. In other cases they developed measures that they then reviewed with Commonwealth Corporation staff before pursuing.

Measuring business impact required a new way of approaching and understanding projects.

**Contextual factors** - Employers varied in the number of participants they sent to training and therefore in their level of interest and cooperation in assisting with business impact measurement. Even among interested employers, the economic challenges of the last three years took attention away from measuring business impact as the survival of enterprises moved to the forefront for owners and executives. The situation rendered employee retention, which is often a relevant business impact measure, almost meaningless, as workers stayed at their jobs for fear of finding themselves unemployed.

**Time Lag** - In many cases, individual and business outcomes can only be measured after sufficient time has elapsed to give the individual participants the opportunity to demonstrate and use their new education and skills. This was particularly true in projects such as those involving pursuit of post-secondary degrees. In such cases, the length of the project did not allow participants to both complete their studies and move into new positions that would benefit employers before the end of the project. In order to capture these business impact results, Commonwealth Corporation is working with the grantees to develop mechanisms for reporting outcomes beyond the grant period.

## OPPORTUNITIES

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The process of measuring business impact proved to be a good indicator of employer engagement.

Despite the challenges outlined above, the process of measuring business impact offered a number of opportunities to WCTF projects, Commonwealth Corporation and the field of workforce development. The process of identifying measures, developing surveys and reaching out to employers on this issue built new capacity among workforce development professionals in Massachusetts. In one instance, survey tools and an approach developed by manufacturing project staff in the first round of WCTF funding were shared with and adapted by two WCTF projects working in early childhood education in the second round of funding. While the context and project goals may be different, the process can be applied across sectors. WCTF projects developed a set of measures and other tools relevant to a range of industry sectors that we can make available to others in the field who seek to undertake similar work. Although there will still be work required to develop appropriate measures, there is the opportunity to benefit from the work and lessons learned from other projects. (Commonwealth Corporation is developing a practitioner's guide to measuring business impact, to be released in November 2011.) By requiring – and supporting – projects in the process of measuring business impact, Commonwealth Corporation gained the opportunity to learn and observe the challenges and successes experienced by these projects so that we can better support future projects. With each new initiative we fund, we can go further in incorporating this element of evaluation at the inception of a program to enhance both program design and evaluation efforts.





## CASE STUDY: BUSINESS IMPACT IN MANUFACTURING

Through its participation in the Massachusetts Workforce Competitiveness Trust Fund, a manufacturing firm North of Boston put nearly its entire workforce of just over 100 workers through a training program intended to increase the general level of manufacturing knowledge, including upgrading skills in Geometric Dimensioning & Tolerance (GD&T). In order to assess the business impact of the training, an evaluator worked with the company's staff to determine where they might find – and measure – a change in business operations that would have resulted from the training.

At the company every part produced carries a "history card" with vital data about the dimensions and other characteristics of the part. The production and quality managers took samples of these history cards and found that, before the GD&T training, there was a 71% error rate of the "true position" (allowable deviation from perfect) calculations recorded by the machine operators. Errors in these calculations resulted in redundant inspection operations to ensure proper reporting on the part history cards.

After the GD&T training took place, true position calculations improved significantly, reducing the operator error rate to 9% from the pre-training error rate of 71%. Practically speaking, this reduction in errors meant that customers did not receive parts or components that were out of compliance, a situation which had been occurring prior to the training. Overall inspection costs were also reduced with the increased accuracy of the documentation. Describing the original impetus for pursuing training, the company CEO commented:

*We needed to make sure that we had folks that were at adequate skill levels in order for us to penetrate new industries - one of which was the aerospace industry, which we have done so. And we needed to be flexible enough to move to where the work is.*

His reaction to the improvements identified through the business impact analysis was as follows:

*That's a huge change. that's exactly what we're looking for is that type of accuracy. These are the history data cards where we record our dimensions and findings. And that is part of the history of making the part that we have to provide for our customers. Obviously in the past, prior to the training, we had count issues and correct data issues that had to be corrected in final inspection. Now, now we've got a huge improvement....Seventy one percent incorrect, now it's nine percent.*

The combination of greater awareness and higher skills across the workforce and evidence of this improved performance, highlighted in the business impact analysis, gave the company's senior managers the confidence to pursue an AS9100 certification, which the company successfully achieved in June 2009, thereby positioning their firm to compete in a broader and more profitable aerospace market.

## LESSONS LEARNED

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Measuring business impact addresses a missing piece in workforce development.

Working with projects on the measurement of business impact has offered a set of valuable lessons. First, there is indeed interest among employers, workforce development and other entities in better understanding and documenting business impact. This suggests that the process should become a standard component of more, if not all, workforce development initiatives. Second, measurement of business impact is not easy work for workforce development staff unaccustomed to this perspective and often lacking tools to carry out the work involved. Projects require individual support to be able to successfully identify relevant measures and establish and carry out plans for measuring business impact. Finally, and perhaps most importantly, the WCTF experience suggests that to really be effective, the process of measuring business impact must be initiated and planned for as part of program proposal development. Defining the intended business impact of a project from the outset can foster clarity of purpose and effective program design, as well as set clear expectations for employers and other stakeholders.

## CONCLUSION

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Measuring business impact addresses a missing piece in workforce development initiatives, such as the WCTF, that are designed to benefit both participants and employers. The process of measuring business impact also encourages employers to assess the value of training and become more engaged in the design and implementation of projects. In an environment of scarce resources, measurement of business impact provides a mechanism to demonstrate whether a program is successful from the employer perspective. If these initiatives show their value, they will encourage investment from both the public and private sector. Moreover, as workforce development staff develops their understanding of business models, operations and terminology through their efforts at measuring business impact, they will develop capacities that will enhance their future ability to work with and respond to the needs of their employer partners. And finally, encouraging careful consideration and evaluation of the business impact of sector projects may contribute to more effective and efficient investment in workforce development efforts.



## APPENDIX: BUSINESS IMPACT MEASUREMENT METHODS, MEASURES AND RESULTS FROM SELECTED PROJECTS

Sector	Methods Used to Gather Information	Business Impact Measures	Results Reported by Projects
Manufacturing	<ul style="list-style-type: none"> <li>• Program-specific surveys of employer staff, usually supervisors and/or senior management (designed by project staff)</li> <li>• Employer reports of internal data/results</li> <li>• Partnership meeting discussion</li> <li>• Nationally recognized - National Institute of Standards and Technology (NIST) - survey (administered by Mass Manufacturing Extension Partnership)</li> <li>• Case study (conducted by CommCorp staff)</li> </ul>	Workforce-related <ul style="list-style-type: none"> <li>• Job retention</li> <li>• Job creation</li> <li>• Worker retention</li> <li>• Skill enhancement</li> </ul>	<ul style="list-style-type: none"> <li>• 26% of survey respondents noted reduced employee turnover</li> <li>• 90% of survey respondents noted improved employee skills compared to skills prior to training</li> <li>• 20% increase in communication between employees and supervisors</li> <li>• On the job communication improved between English language skill development participants and their supervisors</li> <li>• Two of the training events for one employer preserved three jobs and supported the company's goal to continue to diversify their business</li> </ul>
		Competitiveness <ul style="list-style-type: none"> <li>• Productivity</li> <li>• Efficiency</li> <li>• Cost savings</li> </ul>	<ul style="list-style-type: none"> <li>• Improvements in workplace audits to assess appearance and systems</li> <li>• Improved employee ability to complete increasingly complex machining tasks (necessary for company success and growth)</li> <li>• Improved equipment effectiveness as a result of Total Preventive Maintenance (TPM) training</li> <li>• 20% increase in overall employee productivity and efficiency</li> <li>• Reduction of set-up time by 50% on 80% of machines, representing approximately 200 hours of saved set-up time</li> <li>• 30% reduction in scrap in one company and a 50% reduction in scrap in another, resulting in a \$90,000 savings</li> <li>• 61% reduction in error rates of quality and inspection documentation process a result of training on selected core manufacturing processes</li> <li>• 36% reduction (from 121 days to 77 days) in manufacturing time for a part</li> <li>• 144 jobs created; 638 jobs retained</li> <li>• 53% of respondents noted reduced lead time and defect rate</li> <li>• \$6.4 million in cost savings</li> <li>• Employer-reported positive impact of training on profit margins</li> </ul>



Sector	Methods Used to Gather Information	Business Impact Measures	Results Reported by Projects
Healthcare	<ul style="list-style-type: none"> <li>Program-specific surveys of supervisors and senior management (designed by project staff)</li> <li>Employer reports of internal data/results</li> </ul>	Reduction in: <ul style="list-style-type: none"> <li>Vacancy rates</li> <li>Orientation time</li> <li>Overtime expenses</li> <li>Retention rates</li> </ul>	<ul style="list-style-type: none"> <li>The retention rate among CNAs trained through the program was 6.3% higher than the average retention rate for CNAs.</li> <li>[In cases where participants earned Associates degrees through the WCTF, results were not yet available at the time of the writing of this report.]</li> </ul>
		Improvements in: <ul style="list-style-type: none"> <li>Job performance</li> <li>Employee satisfaction</li> <li>Customer satisfaction</li> <li>Productivity</li> </ul>	<ul style="list-style-type: none"> <li>Increased care and communication skills with dementia patients; increased patient care satisfaction</li> <li>Improvement and application of project management skills</li> <li>Increased job satisfaction and productivity</li> <li>Increase in peer/supervisor and patient/client satisfaction</li> </ul>
Travel and Tourism	<ul style="list-style-type: none"> <li>Program-specific surveys of supervisors (designed by project staff)</li> </ul>	Reduction in new employee turnover	<ul style="list-style-type: none"> <li>Program graduates had a 15% lower turnover rate within the first 12 months of employment than the average of other new hires</li> </ul>
		Improved worker performance via improved English skills	<ul style="list-style-type: none"> <li>Employer observation of improved communication (speaking, reading, writing) skills</li> </ul>
Trades	<ul style="list-style-type: none"> <li>Program-specific surveys of employers (designed by project staff)</li> <li>Employer reports of internal data/results</li> <li>Partnership meeting discussion</li> </ul>	Improvement in quality of new hires	<ul style="list-style-type: none"> <li>Participants highly motivated once hired</li> </ul>
		Cost savings	<ul style="list-style-type: none"> <li>\$2500 saved at 3 partners 2009-2010 on advertising costs for new hires, additional savings for non-partners</li> <li>Reduction in costs associated with out of state training</li> <li>Monetary savings associated with reduced broken equipment (tire pressure sensors)</li> <li>98% of participants in automotive program are bilingual, thereby reducing need/cost of translation</li> </ul>
		Strengthening of new - green construction - industry	<ul style="list-style-type: none"> <li>Increased demand for energy efficiency/renewable energy products and services (EE/RE)</li> <li>Employees and contractors increased skills and knowledge in EE/RE</li> <li>2/3 of business partners responding to a survey indicated their business had been more profitable with regard to RE products and services</li> <li>Frequency and extent of collaboration among green construction project/industry partners is high</li> </ul>



Sector	Methods Used to Gather Information	Business Impact Measures	Results Reported by Projects
<b>Financial Services</b>	<ul style="list-style-type: none"> <li>Program-specific surveys of employers (designed by project staff)</li> </ul>	Quality of internship experience for employers	<ul style="list-style-type: none"> <li>90% employer satisfaction with project participant interns</li> <li>Increased satisfaction among employees who directly managed interns</li> <li>Over 90% satisfaction with curriculum among employers</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>Program-specific surveys (designed by project staff)</li> <li>Partnership meeting discussion</li> </ul>	Increased productivity and improved work environment	<ul style="list-style-type: none"> <li>Increased productivity and workplace culture</li> <li>Improved labor/management relations</li> </ul>
		Promotion of trained employees to fill non-entry level vacancies	<ul style="list-style-type: none"> <li>Three employers filled non-entry level vacancies with participants</li> </ul>





