



The Owner's
BLUEPRINT

LABOR RISK MANAGEMENT



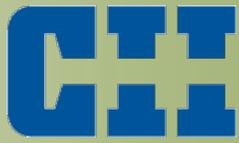


CONTACT US

LRM@CIRanalytics.com

859.339.5071

www.CIRanalytics.com



LEADING THE WAY FOR EFFECTIVE LABOR RISK MANAGEMENT



What Is the Labor Risk Management Program?

The LRM is a transformative, leadership-driven solution for addressing the systemic construction labor challenges which lead to labor shortages and increased project risk.

The LRM deploys cutting-edge industry thinking, resources and tools to advance the Owner commitment to only do business with the contractors who invest in training, grow the skills of their workforce and continuously improve.

Why Is the Labor Risk Management Program Needed?

Consistent, effective workforce training and development is essential to productive project execution. Yet it is not occurring. For this to change and for improvement to happen, workforce development and training must be a core value and a business imperative...just as it is for safety.

1. Transformational Change is Needed
2. The Model for Real Change Is Proven
3. The Business Case for Change Is Solid

Contact us at LRM@CIRanalytics.com | 859.339.5071

www.CIRanalytics.com



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EXECUTIVE SUMMARY

The Labor Risk Management (LRM) Program is a comprehensive technology and service providing early, robust analysis of project labor risk and contractor workforce development programs. This is needed because chronic skilled labor shortages are increasing costs and schedules and resulting in lower quality, more accidents and missed project objectives. Current forecasts indicate skilled labor shortages will increase with a growing economy and current industry age trends.

CONTRACTORS: Contractors need to take the initiative to develop their workforce. Every contractor should have a proactive program for workforce development including attracting, recruiting and training their future skilled workers.

OWNERS: Owners should proactively require contractors to have effective workforce development programs. The Construction Users Roundtable (CURT) recommends that *“Owners should only do business with contractors who invest in training and maintain the skills of their workforce.”* The Construction Industry Institute (CII) research affirms this approach and states that making workforce training a priority will reduce project costs and improve safety.

SOLUTION: Owners should include workforce development in prequalification and management of contractors on their worksites. Owners already include safety in their prequalification requirements and this has resulted in significant reductions in accidents. The same is possible with workforce development. Owner requirements have been proven to motivate contractors to take initiative. It ensures all contractors are participating, saves money and improves the industry.

BARRIERS: Thorough prequalification takes time and effort. Most owner construction management organizations have limited resources and are busy on current projects. They do not have the time and bandwidth required to perform the extra work of prequalification of multiple contractors, or collecting the data needed for this purpose.

LRM: The Labor Risk Management (LRM) program provides full service contractor prequalification capability for owners. The LRM uses the proven Construction Workforce Development Assessment (CWDA) process to provide industry standard assessment of all the contractors with minimum impact on owner staff. The Construction Labor Market Analyzer (CLMA) will perform all the data collection, assessment and reporting and provide the results to the owner.

When the CWDA is added to CLMA workforce analytics, Owners will have a complete process for managing skilled workforce shortage risks on their



projects, and for assuring their contractors have effective programs for staffing current projects and for developing future skilled workers.

The LRM Program includes:

- Ongoing CLMA risk assessments on skilled workforce availability for their current and upcoming projects
- CWDA assessment of the workforce development programs of all the contractors along with improvement recommendations

PROCESS:

Owners submit current and upcoming project information along with a list of the contractors working on their projects or being considered for future inquiries. The owner requires those contractor's participation in the LRM.

The CLMA/CWDA system collects the contractor's workforce development program data, assesses and audits their programs and issues a score for each contractor. Owners can use the CWDA assessment to select the most qualified contractors, and use the CLMA risk assessment to plan projects and mitigate labor shortage risk.

VALUE:

For OWNERS, the LRM Program produces value by providing:

- Limited need for owner staff involvement
- Best available data on labor availability and risks to their projects, based on CLMA Analytics
- Industry standard assessment of their contractor's workforce programs using the CWDA process
- Assurance they are investing in the development the skilled workers for the construction Industry

For CONTRACTORS, the LRM Program produces value by providing:

- Best available data on labor shortage risks for their projects based on CLMA Analytics
- Reliable assessment of their Workforce Development programs
- Effective distribution of CWDA assessment information to multiple owners, eliminating duplicate submittals
- Recommendations to improve operational excellence

COST:

Costs will vary depending on the number of projects, the number of contractors involved and contractor size. For owners, a package price is available, including CLMA Analytics and Labor Risk Management (LRM) assessments. These are cost effective when compared to in-house staffing. For contractors, the program will include CLMA Analytics, LRM data collection and assessment, and sharing of the results with owners.

ROI:

Based on an investment of approximately one percent (1%) of a project's labor budget for training efforts, the resulting benefit-to-cost ratio indicates that for every dollar invested, a return of \$3.00 or more can be achieved.



What is the Labor Risk Management (LRM) Program and what is its purpose?

The LRM Program is a full-service risk analytics and contractor pre-qualification system designed for owners and labor providers (For example, EPC(M) firms) to effectively evaluate contractors and subcontractors for workforce training and development.

The objective is to:

- Prequalify and select contractors based on their workforce development, training, performance, activity and growth
- Facilitate effective project execution by utilizing contractors with highly-qualified craft workers
- Facilitate more effective project labor risk planning
- Improve owner and contractor collaboration on establishing essential labor risk metrics
- Effectively measure workforce and productivity performance and improvement

Owner Value: CLMA analytics continuously evaluate labor risk, plus validation of workforce development and training commitment and procedures during contractor selection.

Contractor Value: CLMA analytics for ongoing labor risk evaluation, plus improved market competitiveness and more effective project planning and execution capability.

Why is the LRM necessary for improvement?

Chronic shortages of skilled labor are increasing costs and schedules and resulting in lower quality, more accidents and missed project objectives. Current forecasts indicate skilled labor shortages will increase with a growing economy and current industry age distributions. Owners and contractors need the best available craft labor demand and supply data to plan their projects, and CLMA analytics have been proven to reliably provide this data.

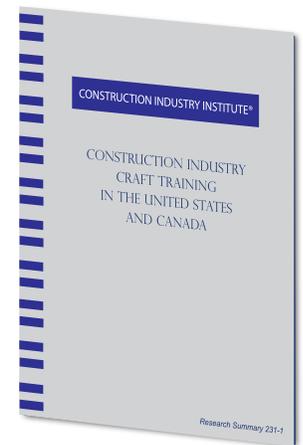
Contractors, as the employers of craft labor, need to take the lead in developing new skilled resources for current and future projects. The recommended role for owners is to prequalify the contractors for all their projects based on workforce development capability.

Construction workplace safety is a primary concern and a cultural mindset for most companies, but consistent, effective workforce development and training has not been effectively addressed. The result is a construction industry significantly impacted by skilled labor availability challenges – not only the availability of workers, but workers with the skills required to execute projects.

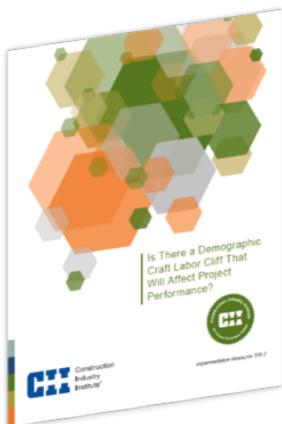
When owners declared safety to be a core value and business imperative, key contractor selection safety metrics were established, safety improvement innovation was unleashed, construction sites and projects become safer, and “zero safety incidents” became achievable. Owners understood the importance of safety for their own operations and most already had strong employee safety programs in place. What was needed was a standardized, institutionalized process for the industry as a whole and labor providers in particular.

The recommendation to prequalify contractors for safety performance originated with the Business Roundtable (BRT), was based on the 1982 Construction Industry Cost Effectiveness study (CICE) and was predicated on demonstrated real cost savings, in addition to avoiding accidents – That is, “Safety Pays.”

- Avoided accidents reduced the direct cost of each accident including costs of emergency management, staffing, administration and investigations.
- Avoided accidents reduced the cost of crew work disruptions and productivity losses that occur when an accident happens
- Having fewer accidents reduced Workers Compensation insurance rates, dramatically reducing future hourly costs



Similarly, when owners make workforce development a core value and a business imperative, the consistent development and deployment of effective workforce training programs (and related metrics) will follow. Industry research demonstrates up to a \$3.00 ROI and more for every dollar invested in training (RT-231). This will enable all stakeholders to lower cost and recoup their investment, just as it did for safety.



Skilled labor challenges now threaten the ability to meet project objectives like safety, cost, schedule and quality. Recent CII research (RT-318) empirically demonstrated labor shortages cause an increase in safety incidents, and missed project objectives, directly proportional to the severity of the shortage realized.

Owners are in the unique position to lead, make workforce development a real priority, incent the right behavior and reduce project risk. The following table illustrates the correlation between labor risk and project challenges.

Craft labor challenges threaten contractors' capacity to meet the primary objectives of owner clients:

Craft labor challenges threaten contractors' capacity to meet the primary project objectives of owner clients:

COST | SCHEDULE | SAFETY | QUALITY

Craft labor Staffing Difficulty	Average Cost Change	Average Schedule Change	OSHA Recordable Incident Cases (per 200,000 hours)
Moderate - Severe	17.3%	22.5%	0.94
Slight	3.2%	12.8%	0.43
No Difficulty	-6.2%	6.4%	0.26

CII RT-318, August 2015



For more than 3 decades, owners have consistently agreed that contractor prequalification should include workforce development. In 1997, the Business Roundtable released a report in which they stated,

“Owners should only do business with contractors who invest in training and maintain the skills of their workforce.”



This policy has been reaffirmed multiple times since by the Construction Users Roundtable and most recently in August 2018 (RT-335) by the Construction Industry Institute.

For decades, the construction industry has debated the workforce problem and its severity. It has implemented many excellent programs to address the numerous workforce-related symptoms; yet has not addressed the root cause of labor and workforce risk – leadership. Leadership is required to bring about transformative change to the construction workforce culture. The LRM is a transformative leadership-driven solution for addressing systemic labor challenges and urgency for its deployment is required.

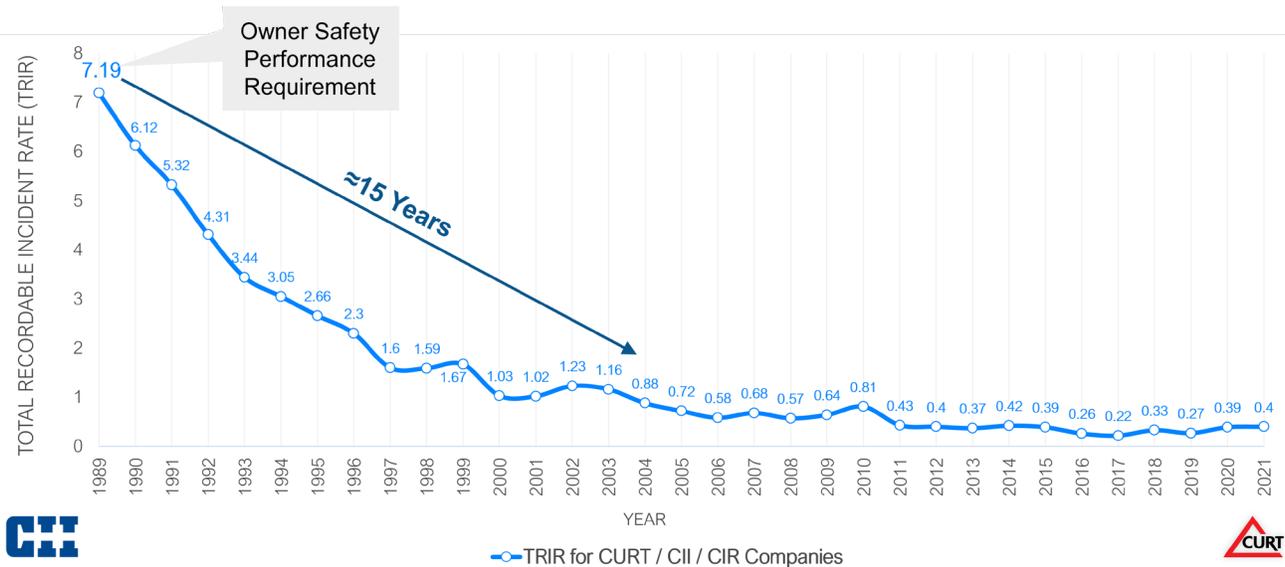
Leadership is required to bring about transformative change to the construction workforce culture. The LRM is a transformative leadership-driven solution for addressing systemic labor challenges and urgency for its deployment is required.

- Transformational change is needed
- The model for real change is proven
- The business case for change is solid

Owner's share responsibility for the workforce

Owners have the most to lose financially when worker challenges are present. While contractors have the final responsibility to recruit, hire, train and retain workers; owners ultimately bear the cost. Active engagement will improve the owner's bottom line and the industry overall. Taking action early in the project planning process enables the owner to control cost and influence what contractors do, just as it has for safety.

Decades ago, construction industry safety performance was unacceptable; even though industry knew how to be safe and OSHA had a standard to measure and benchmark safety performance. However, real change didn't happen until owners insisted on safety improvement, and enforced it through the bid evaluation and contract award processes. Even then, change took time, but the persistent owner commitment to safety excellence ultimately transformed safety performance.



At a minimum, effective evaluation of workforce development improves bid evaluation and contractor selection. Reacting later in the project, when labor challenges are more difficult to overcome, lessens an owner's influence and increases cost.

With the LRM comes a comprehensive solution for prequalifying, assessing and monitoring workforce development. Comprehensive prequalification of workforce development programs can require significant owner resources, so the LRM was designed, tested and launched to minimize the need for owner staff and cost; without compromising quality. Both are achievable.



The value of contractor prequalification and the LRM Program

Very little market research has been devoted to evaluating the return on investment for construction workforce development and training. Further, research indicates that very few construction firms internally measure the return on investment for their craft training efforts. A common reason for the lack of metrics is uncertainty about what should be measured; and many consider training to be essential regardless of any measurable ROI.

One certain advantage to training that is easy to understand, is that without robust investment in the skilled construction workforce, there will not be sufficient labor in the future to meet economic demand. However, the CII RT-231 research demonstrated that measurement of training and workforce development is achievable and essential. Some recognized benefits to skilled labor training include improved productivity, reduced turnover, improved quality, reduced absenteeism and improved safety.

All of these and more are quantifiable and measurable and produce real dollar savings. This helps solidify the business case for early workforce investment on a project (even if it means not always choosing the low first-cost route) through contractor prequalification and contract compliance for comprehensive workforce development – forecasting, recruitment, training and retention.

In particular, the RT-231 research project demonstrated the positive cost impact of craft training on labor, turnover, absenteeism, injury and rework by applying construction market survey data to two distinct project scenarios: A typical 24-month capital industrial project and a typical ongoing maintenance/small capital contract. The project assumptions for purposes of developing this research and the business case are as follows (based on 2006 Dollars):

- Total Installed Cost (Average) \approx \$144,000,000
- Labor Cost \approx \$23,000,000
- Labor Hours \approx 527,000
- Project Duration \approx 78 weeks

Conclusions were reached after analyzing the benefits of craft training from three perspectives: employer, project and craft worker. The evidence shows that if one percent (1%) of the total project labor budget were invested in training, it significantly benefits both workers and employers, as well as improves overall project delivery.



Summary of Expected Training Benefits through CII RT-231 Survey

Expected Training Benefit	Capital Project			Maintenance Project		
	Average	95% Confidence Interval		Average	95% Confidence Interval	
		Low	High		Low	High
Productivity Improvement	11%	6.8%	14%	10%	7.7%	12%
Turnover Decrease	14%	10%	18%	14%	8%	19%
Absenteeism Decrease	15%	10%	19%	15%	8.3%	21%
Injury Decrease	26%	18%	33%	27%	18%	37%
Rework Decrease	23%	17%	29%	26%	18%	35%

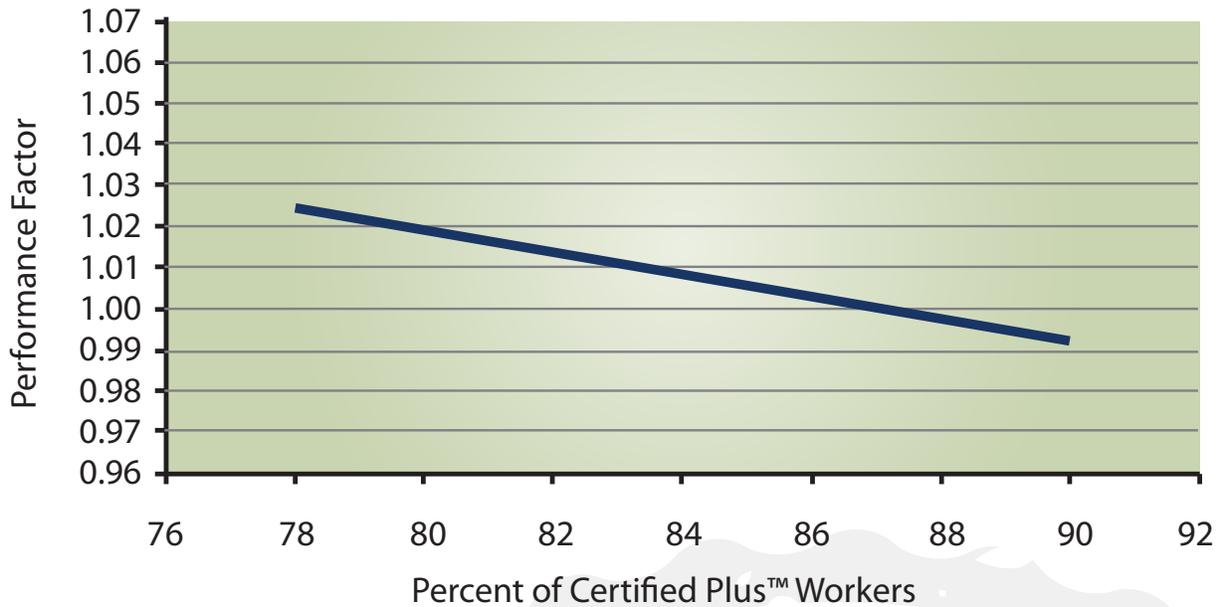
The RT-231 research team also analyzed heavy industrial construction firm case study data for actual projects for two specific companies. One company monitored absenteeism and turnover rates on four projects over 15 months and found that craft training and certification had an immediate impact.

Summary of Expected Training Benefits through CII RT-231 Survey

Expected Training Benefit	Workers With No Training	Workers Receiving Training	Company-Certified Workers
Voluntary Turnover Rate	6.5%	0.6%	3.4%
Absenteeism Rate	7.3%	2.5%	0.3%

The second company evaluated productivity on a construction maintenance project on which the owner actively promoted certification of all craft workers on the project and required the craft workers to be compliant with the NCCER Certified-Plus designation. The percentage of craft workers achieving this designation was measured over a 12-month period. The productivity performance factor was defined as the expected productivity divided by the actual productivity; therefore, a productivity performance factor of less than one indicates better than expected productivity performance. The data enabled the RT-231 team to correlate productivity performance improvement to the number of craft workers achieving Certified Plus designation.

Craft Worker Productivity Performance Factor vs. Percentage of Certification (RT-231)



To establish the business case for craft training from a project, as well as company perspective, the RT-231 team employed a benefit-cost (B/C) ratio analysis, which indicated a robust return is realized from an investment in training.

The RT-231 team applied cost factors to the research data and evaluated it based on the craft workers' duration on the project. For example, increasing craft workers' time on the job decreases the total number of workers hired on the project. This translates into less turnover, fewer injuries, greater productivity and less rework. Because there was increased exposure to training, resulting in increased skill levels, the application of this methodology to a single project, based on survey data, shows a clear ROI which increases the longer craft workers are on the project.

The ROI is based on an investment of approximately \$230,300 (1%) of a project's labor budget (≈\$23 million) being invested in training efforts. The resulting benefit to cost ratio shows that for every dollar invested, a return of up to \$3.00 and more is achievable..



Benefit/Cost Ratios Based on Survey Data for a Single Project (RT-231)

	Single Project Training Model		
	Average Cost & Duration (18 wks)	95% Confidence Interval	
		Low	High
Estimated Productivity Improvement	\$322,257	\$207,564	\$436,951
Estimated Turnover Cost Reduction	\$32,150	\$23,790	\$40,509
Estimated Absenteeism Cost Reduction	\$74,871	\$51,592	\$98,150
Estimated Injury Rate Reduction	\$66,940	\$47,452	\$86,428
Estimated Rework Rate Reduction	\$25,774	\$18,876	\$31,993
Estimated Total Cost Saving	\$521,992	\$349,252	\$693,938
Estimated Training Cost	\$230,296	\$230,296	\$230,296
Estimated Benefit/Cost Ratio (B/C)	2.3	1.5	3.0

When the same methodology is applied to actual project data for two specific companies, based on the percentage of journeyman craft workers completing training to achieve Certified-Plus™ (designation is now “Certified”) designation, the ROI realized is similar. Additionally, the benefit and ROI is realized for both merit-shop and union contractors equally.



Benefit/Cost Ratios Based on Percentage of Certified Plus™ Craft Workers (RT-231)

	100% Certified Plus™	80% Certified Plus™	50% Certified Plus™	30% Certified Plus™
Labor Cost Savings	\$664,364	\$531,491	\$332,182	\$211,061
Turnover Cost Savings	\$5,749	\$4,600	\$2,875	\$1,725
Absenteeism Cost Savings	\$25,185	\$20,148	\$12,592	\$7,555
Total Benefits	\$695,299	\$556,239	\$347,649	\$220,341
Training Cost	\$235,239	\$214,962	\$184,546	\$164,269
Benefit/Cost Ratio (B/C)	3.0	2.6	1.9	1.3

The data assembled through the RT-231 research effort, both survey and actual project data, clearly demonstrate a compelling business case for workforce prequalification. While the RT-231 research focused primarily on training, and indicates a high return for doing so, there are multiple attendant activities which must also occur in concert with training.

- **Validation** – Workforce development efforts must be effectively validated to ensure they are effective and consistently employed.
- **Metrics** – Most companies do not measure the effectiveness of workforce development efforts, but it can and should be done for true accountability.
- **Financing** – Owners are paying for training on union projects, but rarely for non-union projects. Since owners will ultimately bear the cost of insufficient training, they must not simply push the responsibility over to contractors.
- **Data** – Robust collection of workforce related data is essential to understand how improvement is being realized and how to continuously improve.
- **Patience** – Some efforts pay off immediately, but others take more time. As with safety improvement, tangible results will begin to be realized immediately, but full transformation takes time.

A culture of investment, metrics, and accountability drives transformational improvement.



What will LRM success look like for my project?

With the LRM program, owners and participating contractors will have reliable CLMA analytics available for planning the project. In addition, the owner and general contractor will be able to prequalify and select the best available contractors for delivering the skilled workforce required for the project.

In detail, LRM includes:

- Effective planning information for project-level labor demand and risk
- Labor market information for other industries competing with the project for labor
- Understanding of labor availability risk through market-based supply data
- Understanding of the craft-level labor productivity trend for the project
- Improving the bid list development speed and quality
- Capacity to consistently evaluate and validate the quality of contractors' workforce development plans, processes and commitment
- Procurement teams reportedly struggle with the time commitment to collect vendor data and follow-up for timely data delivery. They also often feel unqualified to do this. The LRM will relieve the procurement team of this function so they can focus on other priorities.
- Measurable workforce improvement with improved workforce standards
- More effective contractor selection, with established goals and accountability
- The LRM also includes the capability to effectively define the following for your project...
 - Every potential contractor's workforce development program
 - Which contractors are using market intelligence
 - Each contractor's source of labor planning information
 - Each contractor's knowledge of labor availability in the project area
 - Why contractors are proposing certain labor compensation packages
 - How the project will impact labor availability and wage risk
 - Each contractor's labor risk management strategies for the project
 - Where contractors may be able to recruit workers



HOW THE LRM WORKS

1. Owner engagement

- a. Commit to the LRM Program at the enterprise level or project-by-project
- b. Commit to contractor prequalification and/or bid evaluation, depending on the owner's procurement process (Appendix A)
- c. Integrate contractor requirement language (Appendix A and B) into contracts meeting the requisite threshold criteria (Appendix C – Application Guidance).
- d. Input projects into the confidential CLMA platform

2. Contractor engagement

- a. Subscribe to LRM Program
 - i. Includes CLMA subscription & reporting
 - ii. Includes CWDA subscription & assessment(s)
 - iii. Tiered contractor pricing based on project(s) and/or revenue
- b. Submit owner-required data (Portal and/or templates provided by CIR)
 - i. Supply (Appendix D)
 - ii. Productivity (Appendix E)
 - iii. Safety (Appendix F)
 - iv. Workforce development (Appendix G)
 - v. Other
- c. Complete workforce development prequalification process within 90 days

3. Construction Labor Market Analyzer (CLMA)

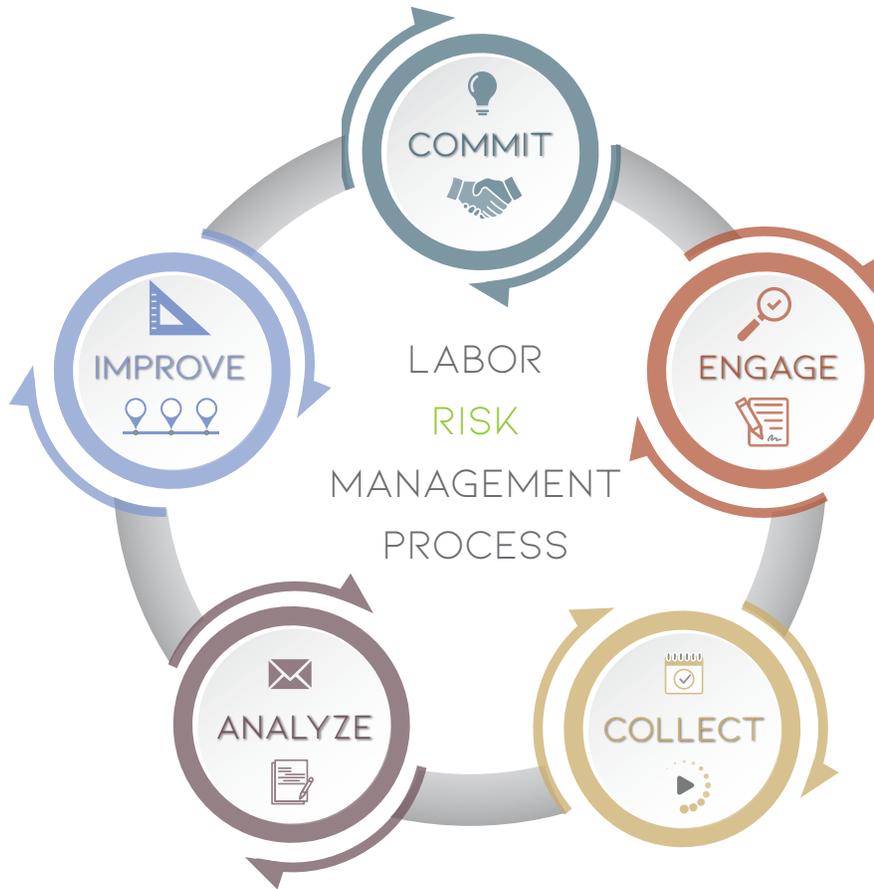
- a. Proven analytics platform for labor market information
- b. Portal for contractor-submitted data
- c. Source of market information for owners at pre-determined frequency
- d. Source of market information for contractors at pre-determined frequency



4. Contractor Workforce Development Assessment (CWDA)

- a. Unique, labor-neutral workforce development pre-qualification platform
- b. Portal for contractor-submitted data (Appendix G)
- c. Validated tool and process for workforce development evaluation and audit





COMMIT	ENGAGE	COLLECT	ANALYZE	IMPROVE
<p>Owner determines which contracts/projects are appropriately sized to deploy the LRM</p>	<p>Deploy the LRM Program during contractor bidding and selection, or initiate survey for current projects</p>	<p>Notify contractors of LRM decision and 90-day compliance timeline</p>	<p>LRM Program compliance is validated and Owner/GC is notified of initial compliance</p>	<p>Results are continuously measured and benchmarked against workforce ROI expectations</p>
<p>Owner and/or GC commits to the LRM Program for current and/or upcoming contracts/projects</p>	<p>Include WFD compliance language in contracts</p>	<p>Contractor initiates LRM Program by completing CWDA assessment and submitting labor supply, productivity and safety data via the CLMA platform</p>	<p>Contractors are provided risk analytics info along with improvement opportunity reports</p>	<p>LRM risk info and workforce improvement metrics are reported on a structured timeline</p>

**Owner / EPC / GC****Contractor / Subcontractor****1. CLMA Package**

a. The complete suite of CLMA market analysis and risk-planning tools:

- ✓ *Project Manager*
- ✓ *Project Labor Forecaster®*
- ✓ *Labor Manager*
- ✓ *Wage & Per Diem Manager*
- ✓ *Market Intelligence*
- ✓ *Productivity Manager*
- ✓ *GeOLD Labor Tracking*
- ✓ *Wage & Per Diem Data*

b. Full-Service from the CLMA team

c. On-Demand, Custom Market Analytics Reports

d. One Wage and Per Diem Escalation Report per year for any US location

e. Training & Assistance

2. Contractors Workforce Development Assessment for all contractors

- a. Scorecard for each contractor
- b. Strength and Opportunities for Improvement Report
- c. Qualify contractors for bidding

3. Current supply data**4. Current productivity metrics****5. Benchmarking & improvement metrics**

6. Internal resources will be freed up due to reduced data collection from contractors and LRM data validation

7. Labor Market Reports provided to all contractors to help them assess and mitigate labor risk in project(s) locations

1. CLMA Package

a. The complete suite of CLMA market analysis and risk-planning tools:

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- ✓ *Project Labor Forecaster®*
- ✓ *Labor Manager*
- ✓ *Wage & Per Diem Manager*
- ✓ *Market Intelligence*
- ✓ *Productivity Manager*
- ✓ *GeOLD Labor Tracking*
- ✓ *Wage & Per Diem Data*

b. Access to pre-prepared Market Analytics Reports for project locations

c. Training & Assistance (Regularly scheduled webinar opportunities)

2. Contractors Workforce Development Assessment

- a. Individualized Scorecard
- b. Strength and Opportunities for Improvement Report
- c. Qualify with owners

3. Access to CLMA white papers and Construction Outlooks

4. One annual subscription per contractor qualifies for any owner requirement

5. Annual CWDA assessment is valid for any owner requirement



Contact Daniel Groves for more information:
dgroves@ciranalytics.com

Appendices

- A – Workforce Development RFP/RFQ Language
- B – CLMA Contract Language
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APPENDIX A

Workforce Development Commitment Language for Use When Requesting Proposals and Quotes (RFP/RFQ) Prior to Contract Award – As Approved by CURT®

Purchaser expects that the skilled craft workers provided for projects and facilities' maintenance have the necessary training and skills to safely and proficiently perform the tasks assigned. Contractors are expected to ensure that each craft worker has these required skills. Furthermore, Purchaser expects its Contractors to be actively engaged in all aspects of workforce development. Therefore, a detailed plan and description of the level of engagement for each of the following areas is required to be included with the Contractor's proposal.

Construction Labor Market Analyzer (CLMA): Describe the level of participation that your company is currently engaged with the CLMA and will continue throughout the duration of the work described in Purchaser's specifications or the level of participation that the Contractor commits to become engaged in the CLMA

Contractor Workforce Development Assessment Tool (CWDA): Provide the CWDA assessment score provided if your Company has participated in the CWDA assessment. If not, describe the level of commitment that is planned and committed by your company to participate in the CWDA assessment process.

Workforce Diversity: Provide a plan describing your Company's commitment to improve workforce diversity for the work described by the Purchaser and include separate improvement targets for minority and women utilization in your Company's workforce.

Non-journeymen Participation: Describe the commitment of your company to provide optimal non-journeymen participation in the workforce utilized to perform Purchaser's work while ensuring that safety, quality and productivity are not compromised. Include examples of target percentages for specific tasks required for the work described in Purchaser's specifications.

Skill Assessments: Describe how your Company commits to ensure that craft workers classified as journeyman level or other classifications have the expected level of skills and experience of each classification utilized by your Company's workforce.

Training Program Involvement: Describe how your Company will be engaged with the local apprenticeship programs, local community technical training programs and/or other local training providers while performing the work described by the Purchaser.

The details of the plans provided for each of the hitherto areas of workforce development will be evaluated with Contractors proposal and factored into the overall evaluation. Contractors failing to submit detailed plans of commitment to address these areas of workforce development will not be considered.



APPENDIX B

Suggested Contract Language to Drive Workforce Development Improvement, Support Industry Benchmarking and Improve Project Planning and Risk Management

Contractor will, within thirty (30) days of contract award, obtain a license agreement with Construction Industry Resources, LLC to deploy the Labor Risk Management Program (LRM), which includes, at minimum, one annual assessment through the Contractor Workforce Development Assessment (CWDA) application; and engagement and utilization of the Construction Labor Market Analyzer (CLMA) application. Contractor will provide, at minimum, contracted project-related supply data for craft, engineering, supervisory and project management positions, productivity metrics, safety metrics and labor cost detail, as requested. Provision of this supply, productivity, safety and cost data will enable more effective labor market planning, risk mitigation and understanding of mobility and age demographics of the skilled labor market for all stakeholders. The CWDA is a unique assessment tool which objectively measures a contractor's commitment to workforce development and provides metrics-driven improvement recommendations. The CLMA is a collaborative tool which facilitates the exchange of labor market information in a secure, confidential environment that is compliant with federal anti-trust regulations and assists with our project labor planning and risk management and mitigation. Details and benefits are included in the attached Appendix ____.

Contractor shall require similar terms of all Subcontractors.

NOTE: For owners and hiring clients wanting to implement the LRM for contracts already in place, we recommend sending a letter to each contractor laying out future LRM plans and asking for immediate engagement. CLMA will provide this letter template.



CURT Contractor Workforce Development Engagement Requirements Guidance Document

The Owner Members of the Construction Users Roundtable (CURT) have committed to include contractor engagement in construction workforce development as a pre-qualification to bid on their projects and/or contractor bid evaluation criteria for such projects. CURT has developed “sample” contract language to aid owners and/or their General Contractors in their efforts to ensure that contractors and subcontractors are engaging in the minimum of activities for workforce development as recommended by the CURT Workforce Committee.

The “Sample Contract Language” recommended by the CURT Workforce Development Committee is not intended to prescribe to contractors what they must do to be engaged in workforce development. Instead, the language requires the contractor bidding on the work to provide what the contractor commits to do in each of the key areas of workforce development that is referenced in the document. The plan of action provided by the contractor in the bid qualification criteria requirements and/or the bid proposals will be used to determine the best qualified bid to perform the Purchasers work. The following is suggested guidance on applying the “Sample Contract Language”.

1. First and foremost, the Owner of the Project should determine which projects and/or circumstances will use the “Sample Contract Language”, or its variants as determined appropriate by the Owner, for bidder qualification or bid evaluation. Regardless of the project or circumstances, Owners should expect all contractors engaged in construction activities for their respective projects to be engaged in workforce development.
2. At a minimum, all contractors providing a significant amount of skilled craft professionals to the Owner’s project will engage in the key workforce development activities included in the “Sample Contract Language”.
3. The language should be applied to contracts for “resident” or full-time maintenance support that would routinely require the work be staffed with the craft professionals needed to maintain the Owner’s facility.
4. The language should be used for contracts applicable to turnaround/outage work where critical staffing needs as defined by the owner are routinely required.

The supply data to be uploaded is as follows - Craft Title, Skill Level, Birthdate, Direct Hire, Union Hire, On-Bench, Residence zip code and Project zip code. This data can be uploaded easily using the available Excel template.

Import Labor Data

1

2

3

4

5

6

Upload File

File Columns

Position & Skill Level

Birthdate

Zip Codes

Confirm

Choose a .csv File to Upload

Browse
Upload

[Download the Labor Supply Template](#)

Preferable CSV Column Headers

Position Name	Skill Level	Birthdate	Direct Hire	Union Hire	Residence Zip Code	Project Zip Code
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NOTE: No Personally Identifiable Information (PII) is requested in this process. The seven (7) data points requested above are essential for understanding labor availability, attrition, mobility and more, but do not allow identification of an individual or employer. Because workers are constantly changing employers, the CLMA uses a proprietary algorithm to identify possible duplicates and prevent them.

The following images are screenshots of the process for entering craft productivity data into the CLMA.

High-Level Productivity Calculator

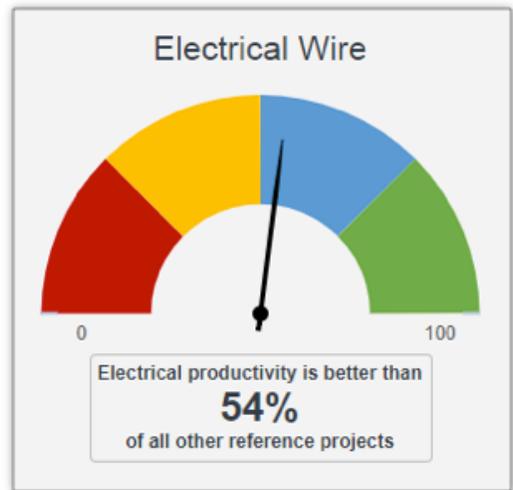
Logos: CCH, COAA (Construction Owners Association of Alberta), CURT, CLMA

Logos: CCH, COAA, CURT

STEP #3: Input On-Site Quantity & Hours by Discipline

Construction Discipline	Installed Quantity (count)	Actual Construction Direct Work-Hours
Total Concrete	Yd ³ 344	25
Total Structural Steel	Tons 223	1,348
Electrical Wire & Cable	LF 78,477	5,889
Total Piping	LF 1,600	576
Instrumentation Devices	EA 90	1,559
Piping Insulation	ELF 9,645	5,288
Total Equipment	EA 18	1,590
Modules & Pre-Assembled Skids	EA 34	4,105
Total Scaffolding Work-hours		120

Buttons: Previous, Next



A key foundational tenant of both CURT and CII is to help improve safety performance on construction projects and drive incidents, injuries and fatalities, to zero. Every organization is in a different place in their journey to zero, so no two paths are the same; however, every organization desires the same outcome – zero. Therefore, to obtain the desired results from all members of the team on any project, there must be a shared perspective of what it means to be working toward the achievement of the outcome. What is our track record internally? How do we compare to other organizations? How do we compare to the construction industry overall? It must be measured to be improved.

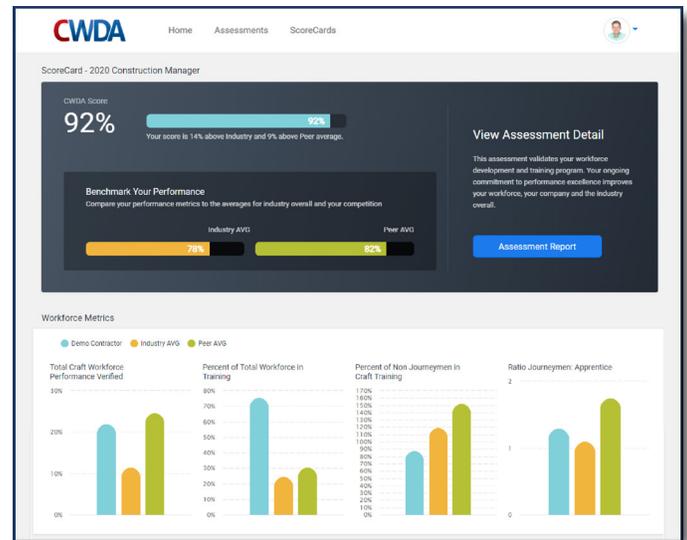
The Safety Benchmarking Portal is designed to capture safety performance data so measurement and improvement can occur. The following screenshot helps illustrate what data is being collected.

- Data Fields**
- ✓ *Industry Sector*
 - ✓ *Employee Type*
 - ✓ *Work Type*
 - ✓ *Total Recordable Cases*
 - ✓ *Total DART Cases*
 - ✓ *Total Fatalities*
 - ✓ *Total First Aid Cases*
 - ✓ *Total Near Misses*
 - ✓ *CURT OSB Adherence*
 - ✓ *CII ZAT Adherence*

When contractors participate in the CWDA they are asked to provide metrics, answer questions, and upload documentation to support and validate their workforce development programs and efforts. A non-biased, third-party auditor reviews the completed assessment and supporting documentation, and assigns an overall score. The contractor then grants access to specific owners to view their CWDA score. The following illustrates the system and process.

The CWDA Process

- Contractor registers and sets up account
- Contractor completes and submits assessment
- CWDA Audit Manager assigns an auditor for the submission review
- Auditor reviews completed assessment and supporting documentation
- Auditor assigns a preliminary Auditor Score to each question in the assessment
- Auditor notifies the Contractor that the pre-audit notes and comments are available for review
- Contractor updates responses and provides additional information as necessary
- Auditor schedules and conducts a telephone audit with the contractor to review responses and information provided
- Auditor updates notes and provides the contractor with post-audit feedback
- Contractor responds to the auditor's notes and provides additional information if necessary
- Auditor reviews additional information provided and updates the Auditor Scores as necessary
- The system publishes the Scorecard and the Strength and Opportunities for Improvement Report
- CWDA Audit Manager reviews and approves the completed audit
- The audit and the final results are released to the contractor
- Contractor identifies the Owners that will be allowed access to the Scorecard and the Strength and Opportunities for Improvement Report



Assessment Questionnaires:

1. Construction Manager
2. General Contractor
3. Specialty Contractor



SCORECARD AND ASSESSMENT REPORT



WHAT IS THE CONTRACTOR WORKFORCE DEVELOPMENT ASSESSMENT (CWDA)?

The CWDA tool and evaluation process is designed to objectively measure workforce development, training, investment, and commitment. The CWDA creates greater accountability and helps improve project labor certainty by growing and improving the skilled workforce through key metrics and effective peer benchmarking.

HOW TO READ THE SCORECARD

- 1 The CWDA score reflects the contractor's overall score out of 100 points. Based on standards of excellence, the score is assigned after the auditor's careful review of workforce program detail and dialogue with the contractor. 90th percentile scores are excellent performers.
- 2 Charts benchmark the overall score to industry and peer contractors.
- 3 These charts show similar scoring and benchmarking for certain KPI's such as workforce development, training investment, and journeyman-to-apprentice ratio.
- 4 The Assessment report details contractor responses to each question, score received, auditor feedback and recommendations for improvement.

HOW TO USE THE SCORECARD

How contractors recruit, retain, develop, grow, and invest in their workforce directly impacts project safety, quality, schedule, budget, and productivity. The CWDA gives owners and contractors key metrics and information about labor risk before awarding a contract.

1. When contractors submit their CWDA ScoreCard, they are communicating workforce development and training priorities. Use the ScoreCard and Assessment Report to evaluate risk potential and capacity to decrease labor risk on the project.
2. Require a CWDA ScoreCard for project proposals to ensure effective project labor risk evaluation. Use the metrics for contractor selection and accountability.
3. Use the CWDA ScoreCard to improve operational excellence.

WHY THE CWDA MATTERS

Extensive industry research shows the investment in craft development is recovered through improved safety, increased productivity, reduced absenteeism, less turnover and greater quality. The expected return for every dollar invested in the skilled workforce is minimally \$3.00.

The CWDA helps owners and general contractors establish realistic expectations, metrics and accountability for skilled workforce development, similar to how safety performance improved over the past 3 decades.

When used as a key criterion for pre-qualification, final selection, and accountability of contractors, CWDA data, metrics and benchmarking will lead to new standards of project excellence and improved outcomes.

WWW.CIRANALYTICS.COM/CWDA



APPENDIX H

Supporting Documents & Resources

Title	Publisher/Owner	Link	Location
Construction Users Roundtable (CURT)	Construction Users Roundtable (CURT)	https://www.curt.org	Various
Construction Labor Market Analyzer (CLMA)	Construction Industry Resources, LLC (CIR)	http://www.myclma.com	Various
Contractor Workforce Development Assessment (CWDA) Tool	NCCER	https://www.nccer.org/workforce-development-programs/contractors-workforce-development-assessment	Various
Construction Industry Craft Training in the United States and Canada (RT-231)	Construction Industry Institute (CII)	Short Version: https://www.curt.org/wp-content/uploads/2018/12/RT-231-1-Value-of-Craft-Training-Research-Summary.pdf	Page 6
Is There a Demographic Craft Labor Cliff That Will Affect Project Performance? (RT-318)	CII	https://www.curt.org/wp-content/uploads/2018/12/Labor-Cliff-RT-318-August2015.pdf	Page 6
Confronting the Skilled Construction Work Force Shortage: A Blueprint for the Future	Business Roundtable (BRT)	https://www.curt.org/wp-content/uploads/2018/12/BRT-Confronting-the-Skilled-Construction-Work-Force-Shortage.pdf	Page 7
Confronting the Skilled Construction Workforce Shortage (WP-401)	CURT	https://www.curt.org/wp-content/uploads/2018/12/WP401-Confronting-the-Skilled-Construction-Workforce-Shortage.pdf	Page 7
Restoring the Dignity of Work: Transforming the U.S. Workforce Development System Into a World Leader (RT-335)	CII in collaboration with CURT, NCCER & IMPACT	Full Version: https://www.nccer.org/news-information/research	Page 7
Restoring the Dignity of Work: Transforming the U.S. Workforce Development System Into a World Leader (RT-335)	CII, CURT, NCCER & IMPACT	Short Version: https://www.nccer.org/news-information/research	Page 7
Construction Industry Craft Training in the United States and Canada (RT-231)	CII	Detailed Research Version: https://www.curt.org/wp-content/uploads/2018/12/RT-231-1-Value-of-Craft-Training-Research-Detailed-Report.pdf	Page 8



Title	Publisher/Owner	Link	Location
Construction Labor: Contractors' Workforce Development Assessment (WP-413)	CURT	https://www.curt.org/wp-content/uploads/2018/12/CWDA-White-Paper-Final-WP413-2013Jul10.pdf	Page 13
CWDA Assessment for Construction Managers	CURT & NCCER	https://www.curt.org/wp-content/uploads/2018/12/CWDA-Self-Performing-General-Contractor-Questions-042114.pdf	Page 24
CWDA Assessment for Sub-Contractors	CURT & NCCER	https://www.curt.org/wp-content/uploads/2018/12/CWDA-Sub-Contractor-Questions-042114.pdf	Page 24





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