

Are we there yet?

WorkFace Planning
Conference 2013

EVENT GUIDE

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WELCOME TO THE CONFERENCE

Dear Conference Participants,



On behalf of the Construction Owners Association of Alberta (COAA), we would like to thank you for your continued support of the WorkFace Planning Model.

The theme for this year's conference is Advanced Work Packaging and WorkFace Planning: Are We There Yet?

As the WFP model matures, we are finding that the industry wants to better understand the details of how to effectively implement WorkFace Planning, and the related best practice of Advanced Work Packaging.

In exploring the conference theme, we will hear from industry representatives that have used or are using

AWP & WFP systems on real-world projects. We will also feature presentations by experts in implementation and technology.

Further, as we move toward the more complete concept of Advanced Work Packaging and WorkFace Planning, we will hear from representatives of both COAA and CII, who will present the key deliverables of the COAA/CII joint committee and research project. Project reports will be provided to all conference attendees.

Breakout sessions this year will feature two specialized knowledge tracks and a conference theme track, as follows: *AWP & WFP Best Practices, Technologies that Support and Enhance AWP & WFP*, and *AWP & WFP Implementers*

We would like to thank all of our sponsors for their support and commitment to the practice of WorkFace Planning. We would also like to thank the many speakers for donating their time and sharing their knowledge with us over the next two days.

Finally, we would like to thank you for believing in WorkFace Planning and for taking the time to attend and participate in this conference.

We welcome your comments and recommendations over the next two days, as they will help to shape the future direction of the WorkFace Planning model.

Sincerely,

The COAA WorkFace Planning Conference Organizing Committee

THANK YOU FOR YOUR SUPPORT

COAA is fortunate to have a strong list of member companies and volunteers. Putting this conference together requires the support of a large number of speakers and their employers. We could not do it without you.

Our sponsor support is also essential to staging this event.

Finally, the WorkFace Planning Model would not exist without the contributions of the COAA members.

CONFERENCE SPONSORS



CONFERENCE THEME

AWP & WFP: ARE WE THERE YET?

When the Construction Owners Association of Alberta (COAA) struck the WorkFace Planning Committee in 2003, who would have imagined the impact that decision would have?

When the committee began, the goal was to improve labour productivity on Alberta energy-based construction projects. The original plan was to develop a model that would take a few years to develop and would be used on very large Alberta oil and gas projects.

Fast-forward 10 years and WorkFace Planning is used not only in the energy sector in Alberta but is being applied to large industrial and commercial projects around the world. WorkFace Planning is being used, in some fashion, in North America, South America, Australia, Europe... well, frankly, everywhere.

In 2009, the Construction Industry Institute (CII) began studying the work done by COAA and in 2011, COAA and CII created a joint research venture. The result has been the creation of Advanced Work Packaging and the expansion of WorkFace Planning.

There are more resources than ever before, but are we there yet? Over the next two days, we will explore that question and it will be up to you to provide your own answer.

AWP & WFP IN CONTEXT

Projects are getting bigger and more complex and we compete for labour and other resources on a global scale. Projects around the world are having difficulty coming in on budget and schedule.

A demographic bubble means we will be losing our older skilled workers at an alarming rate.

Do we need to find a better way to plan and execute our projects? Of course we do. The question is: are we there yet, or do we need to do more?

CONFERENCE HIGHLIGHTS

- All the leaders in the development of WorkFace Planning tools in one place
- The chance to compare all the available tools
- Find out what is available to improve your project's performance

AGENDA AT-A-GLANCE: DAY 1

TIME	MAIN CONFERENCE AREA
1:00 - 2:00 PM	REGISTRATION, TRADESHOW & NETWORKING
2:00 - 3:30 PM	KICK-OFF, AWP & WFP: INSIDERS' PERSPECTIVES, TECHNOLOGY EXPERTS PRESENTATION
3:30 - 4:00 PM	BREAK, TRADESHOW & NETWORKING OPPORTUNITIES
4:00 - 5:30 PM	COAA / CII PANEL, TECHNOLOGY EXPERTS PRESENTATION
5:30 - 6:00 PM	BREAK, TRADESHOW & NETWORKING OPPORTUNITIES
6:00 - 7:30 PM	KEYNOTE PRESENTATION, TECHNOLOGY EXPERTS PRESENTATION
7:30 - 9:00 PM	TRADESHOW, NETWORKING, HORS D'OEUVRES & CASH BAR
<i>Note: schedule subject to change</i>	

AGENDA AT-A-GLANCE: DAY 2

TIME	BREAKOUT SESSIONS AND CONFERENCE-WIDE EVENTS
7:30 - 8:30 AM	REGISTRATION, TRADESHOW & BREAKFAST BUFFET
8:30 - 9:00 AM	CONFERENCE-WIDE KICK-OFF SESSION
9:00 - 10:00 AM	TECHNOLOGY TRACK BENTLEY SYSTEMS AWP & WFP BEST PRACTICES TRACK WORKFACE PLANNING: AN INDUSTRY PERSPECTIVE IMPLEMENTERS' TRACK JV DRIVER PROJECTS
10:00 - 10:30 AM	CONFERENCE-WIDE: BREAK & TRADESHOW
10:30 - 11:30 AM	TECHNOLOGY TRACK INTERGRAPH AWP & WFP BEST PRACTICES TRACK PROCESS: FLOWCHART TOOL IMPLEMENTERS' TRACK AWP & WFP IMPLEMENTATION: AN OWNER'S PERSPECTIVE
11:30 - 1:00 PM	CONFERENCE-WIDE: LUNCH AND SPECIAL PRESENTATION
1:00 - 2:00 PM	TECHNOLOGY TRACK AVEVA AWP & WFP BEST PRACTICES TRACK CONSTRAINT CHECKING YOU CAN BELIEVE IMPLEMENTERS' TRACK FLUOR
2:00 - 2:30 PM	CONFERENCE-WIDE: BREAK & TRADESHOW
2:30 - 3:30 PM	TECHNOLOGY TRACK ELEMENT INDUSTRIAL SOLUTIONS AWP & WFP BEST PRACTICES TRACK TOOLS: CONTRACTS, CHECKLISTS AND MATURITY MODEL IMPLEMENTERS' TRACK JACOBS
3:30 - 4:30 PM	TECHNOLOGY TRACK ORACLE PRIMAVERA AWP & WFP BEST PRACTICES TRACK LESSONS LEARNED: FINDINGS AND AN EXAMPLE IMPLEMENTERS' TRACK MAKING YOUR IMPLEMENTATION A SUCCESS
<i>Note: schedule subject to change</i>	

DAY 1 | CONFERENCE-WIDE EVENT | 2:00 PM

INSIDERS' PERSPECTIVES

AWP & WFP: Are we there yet? Insiders' perspectives

A panel of AWP & WFP insiders (committee members or chairs) will share the journey of AWP and WFP from inception to today, outlining plans for the future. Along the way, they will share the events that shaped that journey. They will share their thoughts on the conference theme (“...are we there yet?”)

Featuring Lloyd Rankin, President and CEO at Group ASI; Yogesh Srivastava, Manager, Construction WorkFace Planning and EWPs at North West Redwater Partnership; Larry Staples, P.Eng., Construction Owners Association of Alberta; and Al Wahlstrom, Vice President, Major Capital Projects at Toyo Engineering Canada Ltd.

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DAY 1 | CONFERENCE-WIDE EVENT

TECHNOLOGY EXPERTS PRESENTATIONS

Special features from construction technology experts

Scheduled throughout the conference-wide events of September 17th will be our special features on technologies that support and enhance Advanced Work Packaging and WorkFace Planning activities on construction projects. These condensed presentation will help you choose which technology-based breakout sessions you may want to attend on September 18th.

Featuring AVEVA, Bentley Systems, Element Industrial, Intergraph Corporation, and Oracle Primavera.

Timing of events: Please flip back to the day 1 agenda at-a-glance (page 4) in this guide.

NOTES

DAY 1 | CONFERENCE-WIDE EVENT | 4:00 PM

COAA / CII PANEL PRESENTATION

Members of the Joint COAA/CII team will discuss what they learned in their two year study and talk about the track sessions they will present on day two

Featuring Michael Bankes, Civil / Structural / Architectural Department Manager at Fluor; Robin Mikaelsson, PMP, Senior Consultant at Bentley Systems, Inc.; William O'Brien, Ph.D, Associate Professor at University of Texas at Austin; Jim Rammell, VP Construction Operations at Wood Group Mustang; and Glen Warren, COAA WorkFace Planning Committee Co-chair

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DAY 1 | CONFERENCE-WIDE EVENT | 6:00 PM

KEYNOTE PRESENTATION

We are thrilled to announce that recognized industry expert Dr. Ted Blackmon will be present at this year's conference as our keynote speaker!

THE FUTURE OF WORKFACE PLANNING

The adage goes “You can't know where you are going until you know where you have been.” This presentation will provide a historical perspective of WorkFace Planning, then contemplate on the current state-of-affairs and finally move on to provide a vision of what the future may hold. Key issues will be raised regarding what we need to do as collective community to more quickly realize the vision. A holistic perspective combining people, process and technology will be taken, as the harmonizing of these three critical elements are essential for success.

ABOUT DR. TED BLACKMON



A visionary and entrepreneur, Dr. Blackmon is a recognized leader in the area of construction automation, robotics, virtual environments, and systems integration for real-time supervisory control applications. He helped to pioneer the market for virtual construction simulation and automation tools for Advanced Work Packaging and 4D/5D/6D BIM.

Dr. Blackmon received his BS in Mechanical Engineering from Penn State University, where he graduated at the top of his class. He received his Ph.D. in Mechanical Engineering from the University of California, Berkeley in 1998, where his research focused on neurological control of human movement and vision. He was honored as a Penn State Alumni Achievement Award recipient in 2005.

Dr. Blackmon has been invited to speak at the COAA WorkFace Planning Conference for his unique knowledge, experiences and contributions in the domain of construction technologies, systems and processes, specifically in the areas of Advanced Work Packaging and WorkFace Planning. In his keynote presentation, he will share his personal and professional perspectives on the conference theme.

DAY 2 | 9:00 AM | TECHNOLOGY TRACK

BENTLEY SYSTEMS PRESENTS...

Work Package Server

Building upon their rich legacy and deep domain expertise from over 150 ConstructSim implementations over the past 12 years, Bentley Systems will be providing an overview of their new Work Package Server (WPS) construction solution for the automation of Advanced Work Packaging and WorkFace Planning. Learn how Bentley's Construction Solution takes AWP to an entirely new level with document, data and change management combined with work pack templates, work flow engine, web portal and a suite of mobility apps.

Featuring Robin Mikaelsson, PMP, Senior Consultant at Bentley Systems, Inc.

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DAY 2 | 9:00 AM | AWP & WFP BEST PRACTICES TRACK

AWP & WFP: AN INDUSTRY PERSPECTIVE

The COAA WFP committee held an invitation-only event in 2012 with a select group of industry experts and stakeholders to discuss the challenges associated with implementing WorkFace Planning. This session will discuss those findings and how they have been used to advance the WorkFace Planning Model. There will be opportunities to share your thoughts as to the future direction the committee should take. One of the COAA WFP Committee co-chairs will be present for the Q&A session.

Featuring Joseph Hobbs, R.E.T., P.L. (Eng.) for CoSyn Technology, Edmonton Operations, WorleyParsons Canada; and Yogesh Srivastava, COAA WorkFace Planning Committee Co-chair

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DAY 2 | 9:00 AM | IMPLEMENTERS' TRACK

JV DRIVER PROJECTS PRESENTS...

Are we there yet?

A three part presentation, JV Driver will be providing history on the WorkFace Planning process and looking at the evolution of the planning process that brings us to today's use, including their experience with implementation and execution. Asking the question "are we there yet?", JV Driver discusses the future of WorkFace Planning.

Featuring Mike Miketon, Corporate Project Controls Manager at JV Driver Projects Inc. and Scott Wilson, Project Manager and Corporate WorkFace Planning Lead at JV Driver Projects Inc.

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DAY 2 | 10:30 AM | TECHNOLOGY TRACK

INTERGRAPH PRESENTS...

SmartPlant Construction: Work Package Planning from Component Lists and Non-3D

This session will showcase the creation, management and progressing of detailed Field Installation Work Packages from components list data. This includes the loading of cable pull schedules from electrical design applications. Attendees will also learn about the new interface for packaging individual components (e.g., cables, instruments, and equipment) into work packages for subsequent progressing and reporting. SmartPlant Construction's new enhancements for sequencing and scheduling will also be featured including the new user interface for setting schedule dates for work packages that includes sequencing and dependencies and the new features that enable users to calculate durations based on crew sizes and to view Gantt charts animated over time.

Featuring Jason Dubose, Executive Process Consultant, Materials & Construction; and Chuck Gill, Technical Director, Regional Business Development

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DAY 2 | 10:30 AM | AWP & WFP BEST PRACTICES TRACK

PROCESS: FLOWCHART TOOL

The flowcharts created by the COAA / CII joint committee will help clarify the roles and deliverables in every stage of the project life cycle. The flowcharts are supported with a variety of newly developed resources. A web-based application has been developed that will improve the usability and functionality of these flowcharts and their associated documents. This presentation will highlight the new flowchart tools, with opportunities for Q&A.

Featuring Robin Mikaelsson, PMP, Senior Consultant at Bentley Systems, Inc.; and Lloyd Rankin, President and CEO at Group ASI.

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DAY 2 | 10:30 AM | IMPLEMENTERS' TRACK

AWP & WFP IMPLEMENTATION: AN OWNER'S PERSPECTIVE

A COAA WorkFace Planning Committee Co-chair and owner company representative will share his (and the COAA / CII joint committee's) thoughts on the owner's role in AWP & WFP. This will be a very thought-provoking session.

Featuring Yogesh Srivastava, COAA WorkFace Planning Committee Co-chair

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DAY 2 | 1:00 PM | TECHNOLOGY TRACK

AVEVA PRESENTS...

Building Excitement: AVEVA's solution for Advanced Work Packaging and WorkFace Planning

In accordance with industry recommendations from COAA and CII, AVEVA has successfully refined and developed a cutting edge tool for Advanced WorkFace Planning targeted at the capital project construction and execution market.

AVEVA's solution provides a seamless integration of the 3D model to the 4th dimension of time with real-time visualization of the build sequence and the 5th dimension of material status and visibility at the line-item level of the Field Installation Work Package (FIWP).

Recognizing the needs of the WorkFace Planner, the tool is both agile and easy to use on the worksite or in the home office.

AVEVA's concept of vertical planning is exploited to provide full planning visibility at all levels serving both the construction managers and the construction contractors.

Featuring Rainer Lamping, head of AVEVA ERM Planning & Control

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DAY 2 | 1:00 PM | AWP & WFP BEST PRACTICES TRACK

CONSTRAINT CHECKING YOU CAN BELIEVE

In this session, technology experts from Atlas RFID Solutions and Intelliwave will deliver presentations showing how RFID applications can support and enhance construction project planning and management activities.

Featuring Dale Beard, President of Intelliwave Technologies and Jon Chesser, Vice President of Construction Solutions at Atlas RFID Solutions.

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DAY 2 | 1:00 PM | IMPLEMENTERS' TRACK

FLUOR PRESENTS...

Are we there yet?

Advanced Work Packaging and WorkFace Planning: Are we there yet? An EPC's perspective.

Featuring TBA

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DAY 2 | 2:30 PM | TECHNOLOGY TRACK

ELEMENT INDUSTRIAL PRESENTS...

Simplify your field data collection

At Element our vision is to simplify data collection through intuitive, easy and fun-to-use digitization on mobile devices and new technologies for the construction industry's front-line supervision, while at the same time streaming the required unaltered data to your project's PPM, MM and ERP systems. We have found that a situation exists within most companies in which there is a gap between the communications of field activities to construction management. Other tools exist to keep schedule and cost in check, but the information being fed into these systems come from word of mouth, paper and/or spreadsheets. This process results in large indirect construction costs, and in many cases this information may not be accurate and paint a false picture of project reality, which in turn encourages wrong remedial actions. Element strives to give its users a set of measurement tools providing one truth of almost irrefutable data, enabling your construction management teams to be truly in control and in an improved position to make decisions that will not only lower costs, improve productivity and lead to higher profits, but can give your next project a level of predictability that is not found in today's construction industry. Come spend an energetic, fun-filled hour with us as we demonstrate how our mobile apps (in the hands of your front line supervision) could make a positive change on your next project.

Featuring Jack Richey, Sales Manager at Element Industrial Solutions; Ben Swan, VP Marketing & Sales at Element Industrial Solutions; and Andy Turnbull, Training Manager at Element Industrial Solutions.

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DAY 2 | 2:30 PM | AWP & WFP BEST PRACTICES TRACK

TOOLS: CONTRACTS, CHECKLISTS AND THE MATURITY MODEL

This session will review some of the tools developed to aid in AWP & WFP implementation. Three of the key areas are:

- Contracts (the approach, types and strategy)
- Checklists (where is your project?)
- Maturity (where is your organization?)

The presenters will give you tools to advance your ability to implement.

Featuring Yogesh Srivastava, COAA WorkFace Planning Committee Co-chair; and Glen Warren, COAA WorkFace Planning Committee Co-chair.

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DAY 2 | 2:30 PM | IMPLEMENTERS' TRACK

JACOBS PRESENTS...

The next barrier to effective project execution: are tools all it takes?

Our WorkFace Planning and project management tools have significantly evolved since the early days of major construction execution, but why haven't performance indicators improved in parallel? We may be missing the most important link between tools and project success...

Featuring Randy Esser, Construction Manager at Jacobs.

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DAY 2 | 3:30 PM | TECHNOLOGY TRACK

ORACLE PRESENTS...

How Oracle Primavera supports WorkFace Planning

In this breakout session, Oracle will present Primavera, an application that supports and enhances AWP & WFP systems.

Featuring Garrett E. Harley, Director Engineering & Construction Strategy, Oracle Primavera

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DAY 2 | 3:30 PM | AWP & WFP BEST PRACTICES TRACK

LESSONS-LEARNED: FINDINGS AND AN EXAMPLE

Dr. William O'Brien and Michael Bankes will offer evidence collected from construction projects that have implemented some degree of Advanced Work Packaging, demonstrating the positive impacts, and provide a practical example of how your project might look when executed using the principles of Advanced Work Packaging.

Featuring Michael Bankes, Civil / Structural / Architectural Department Manager at Fluor; and William O'Brien, Ph.D, Associate Professor at University of Texas at Austin

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DAY 2 | 3:30 PM | IMPLEMENTERS' TRACK

MAKING YOUR IMPLEMENTATION A SUCCESS

What are the things that contribute to a project's success? The findings are in, and there a number of contributing factors. These relate to the owners, construction managers, project managers, supply chain, engineers and construction contractors. If you come to this session, you will learn what took over 10 years to develop.

Featuring Lloyd Rankin, President and CEO of Group ASI; and Glen Warren, COAA WorkFace Planning Committee Co-chair

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ABOUT OUR GOLD-LEVEL SPONSORS

AVEVA INC.

AVEVA has been the world's leading engineering software provider to the plant, power and marine industries for over 45 years. We have achieved this by continual and visionary technical innovation, working in close partnership with many of the world's leading engineering companies. As a result, AVEVA is trusted to deliver not only the most powerful software tools available, but to put its customers' long-term business interests at the heart of its technology development.

BENTLEY SYSTEMS INC.

Bentley is the global leader dedicated to providing architects, engineers, constructors, and owner-operators with comprehensive architecture and engineering software solutions for sustaining infrastructure. Founded in 1984, Bentley has nearly 3,000 colleagues in more than 45 countries, \$500 million in annual revenues, and, since 2001, has invested more than \$1 billion in research, development, and acquisitions.

ELEMENT INDUSTRIAL SOLUTIONS INC.

Element creates cloud based software tools and platforms to bridge the gaps between the owners, project management, construction management, contractors and the field crews. We are the only software company to offer our clients true tools designed for front line construction supervision and field workers that standardize construction management. Our patent pending technology allows construction execution teams to easily digitize and collaborate with project managements systems, providing a real-time, one truth, and an irrefutable source of project data.

Element was founded in 2008, in Edmonton, Alberta. Since opening up our first office in 2008, Element has been busy expanding its operation, we now have offices in Edmonton and Calgary, Alberta as well as Seoul, South Korea.

INTERGRAPH CORPORATION

Intergraph® is a leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data and infuse the world with intelligence to make processes and infrastructures better, safer, and smarter. The company's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

ORACLE CORPORATION

With more than 390,000 customers—including 100 of the Fortune 100—and with deployments across a wide variety of industries in more than 145 countries around the globe, Oracle offers an optimized and fully integrated stack of business hardware and software systems.

Oracle Primavera is the leading Enterprise Project Portfolio Management (EPPM) solution for project-intensive industries. It offers best-in-class capabilities focused on mission critical PPM requirements of industries like engineering & construction, discrete and process manufacturing, public administration, financial services and others. Oracle Primavera enables enterprise agility, team productivity, portfolio predictability and overall project management efficiency. The result is the ability to drive down costs, minimize risk and deliver results to key stakeholders.

ABOUT OUR SPEAKERS

Michael Bankes is currently Civil / Structural / Architectural Department Director at Fluor in Southern California and COP Co-chair at Construction Industry Institute (CII).

Dale Beard, P.Eng is the President of Intellwave Technologies. Dale works directly with end users to understand solution requirements to help deliver value in addressing common pain points for material, equipment and personnel management on large industrial construction projects. Prior to co-founding Intellwave in 2007, Dale was a Product Manager for Agilent Technologies in the Signal Analysis Division for four years located in Santa Rosa, California. As a product manager, Dale helped to understand customer requirements, lead new product launches and train the worldwide sales force on the latest RF test equipment used for manufacturing devices with 3/4G cellular, Bluetooth, ZigBee, and Wi-Fi technologies. Dale spent the next 3 years in Seattle, Washington as a Product Planner and Product Manager for the Fluke Corporation working in the Precision Measurement Division. At Fluke, Dale was instrumental in determining product requirements and managing remote teams around the world to deliver new calibrator instruments into the market, for electrical and RF measurements. Dale received a B.Sc. in Electrical Engineering with Honors in 2000 from the University of British Columbia and an M.B.A from the Foster School of Business at the University of Washington in 2007. Dale is currently registered as an active member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA).

Michael Buss joined Intergraph 2001. Possessing more than 25 years of Software Development and consulting experience, Michael is a natural fit in his role as a Senior Vice President for Global Business Development and Product Management of Intergraph's Materials Management and Construction product line within Inter-

graph's Process, Power & Marine division. He possesses strong expertise regarding EPC and Owners business processes from dozens of implementations around the world. Michael Buss holds a Bachelor of Science degree in Engineering from Germany.

Jon Chesser has more than a dozen years of experience as a sales and marketing manager, product manager, business process consultant, and project manager. For the last seven years Mr. Chesser has been instrumental in expanding the use of RFID, Barcoding and GPS technology to support materials management work processes in industrial construction projects and has implemented this technology at more than 50 industrial project sites worldwide. In 2012, Mr. Chesser moved to Calgary, AB and is responsible for expanding the use of Atlas' RFID based site materials management solution, Jobsite Visibility Extension (Jovix™), in the Canadian market. Mr. Chesser has a MBA from the University of Alabama Birmingham and a degree in Marketing from Auburn University. Mr. Chesser is an active member of the COAA Workforce Planning and Productivity Committees and is dedicated to improving construction productivity with technology on Canadian Oil Sands construction projects.

Eric Crivella is the Plant Construction Executive at Bentley Systems, Inc. In this role Mr. Crivella uses his expertise in the implementation of workforce planning and construction automation solutions to make owner operators, construction managers and direct hire constructors more safe, effective and efficient. Mr. Crivella has been an integral part of implementing ConstructSim and BIM technology on well over 100 projects over the past twelve years. Prior to joining Bentley Systems via an acquisition in May 2008, Mr. Crivella was the Director of Business Development at Common Point. He was one of the founders of Reality Capture Technologies (RCT) which acquired and merged with Common Point in 2003. Prior to starting RCT, Eric lead the business development efforts for a management consulting firm specializing in strategic action planning, process control and system integration for large manufacturing firms. Eric also spent four years selling and managing nuclear decontamination and decommissioning projects. He has a business degree and minor in Management Information Systems from Pennsylvania State University.

Jason Dubose is a Global Business Development Executive Consultant for Procurement, Fabrication and Construction solutions at Intergraph. He has 30 years of experience both as a customer of Intergraph with Boeing Aerospace and Electronics for 8 years supporting Intergraph products for the design of the International Space Station as well as 22 years at Intergraph. At Intergraph, he has held roles in Product Management and Controls for PDS, SmartPlant 3D and SmartPlant Review as well as the manager for major on-site customer support services contracts. For the past 5 years, he has lead consulting efforts for SmartPlant Construction implementations around the globe. Mr. Dubose holds a Bachelor of Science in Computer Science and Mathematics from the University of Alabama, Birmingham, 1985.

Randy Esser is Jacobs' General Manager of Canadian Construction. Beginning his career with a Bachelor of Science in civil engineering from the Virginia Military Institute, Randy has more than 37 years of experience with petrochemical, power, pulp and paper, and chemical industrial construction projects in North America. His project management responsibilities have included the management of direct and third party labor forces, cost and schedule performance, safety processes, client liaison, constructability, and execution of field engineering activities for construction management and direct hire projects. Randy joined Jacobs in 2010 and most recently held the position of Construction Director for the BP Whiting Indiana Refinery Modernization Project.

Chuck Gill is responsible for Business Development activities in the Americas region. This includes the full suite of SmartPlant Enterprise solutions. Prior to joining Intergraph, Chuck worked for a leading EPC and he has over 20 years of experience in engineering and construction for the process industries, with specialties in materials management and project controls.

Garrett E. Harley is Director of Engineering & Construction Strategy at Oracle Primavera.

Joe Hobbs is currently Manager, Strategic and Special Projects at WorleyParsons Canada - CoSyn Technology. Joe has over twenty-five years of experience in multi-discipline leadership, management, civil / structural engineering and projects. He has considerable EPC and in-field construction/maintenance experience which he brings to bear as a senior member to the growth and sustainability of the organization. Joe is an active member of the COAA WorkFace Planning Committee.

Rainer Lamping is head of AVEVA's Enterprise Resource Management (ERM) System for Planning and Control, and based in AVEVA's Bremen office in Germany. He has worked for AVEVA for the past nine years in a Product Management, Consulting position with a specific focus in construction management. He has worked on various plant and marine projects around the globe including; VT Shipbuilding (UK), Shanghai Shipyard (China), Technip Oy (Finland), Ingalls Shipbuilding (USA) to name a few. Rainer holds a Master's Degree in Computer Science and a Bachelor's Degree in Mechanical Engineering.

Robin Mikaelsson is a senior construction consultant with over 20 years in the construction industry starting as a tradesman in the field. In 2000 Robin completed education in process pipe engineering (SAIT and University of Houston) then worked as an engineering design lead for several years. In 2003 completed education in Project Management and obtained PMP credentials (PMI) and returned to the field in construction management. Over the years he has worked as WFP manager on many major industrial projects ranging from \$3 million to \$20 billion. Robin has been instrumental in development of the original WFP model and continues to work with industry bodies to further develop the WFP philosophy as an active committee member with both COAA and CII RT 272. In 2009, Robin

joined Bentley Systems in a global role in working with clients to further their WFP implementations in order to better utilize ConstructSim.

Mike Mike-ton is currently Corporate Project Controls Manager at JV Driver Projects, Inc.

Dr. William J. O'Brien focuses his professional efforts on improving collaboration and coordination among firms in the design and construction industry. Dr. O'Brien is an expert on construction supply chain management and electronic collaboration, where he conducts research, teaches and consults on both systems design and implementation issues. He was the lead editor on the recently published Construction Supply Chain Management Handbook (CRC Press). His research has been supported by the National Science Foundation, National Institute of Standards and Technology, Construction Industry Institute, and Texas Department of Transportation. He is the author or co-author of over 100 journal articles, book chapters, conference papers, and technical reports. Dr. O'Brien is currently an Associate Professor and the Phil M. Fergusson Centennial Teaching Fellow in the Department of Civil, Architectural, and Environmental Engineering in the Cockrell School of Engineering at the University of Texas at Austin.

Jim Rammell As Vice President of Corporate Construction Operations for Wood Group Mustang, Jim Rammell provides comprehensive oversight of all construction management operations and facilities inspection activities. Jim joined Wood Group Mustang in 2008 with more than 20 years of experience in all phases of the project life cycle. He also directs construction strategy development and implements construction execution approaches for Wood Group Mustang projects. His expertise in project management, scheduling, design coordination, and procurement enables him to reliably complete difficult projects, on schedule and on tight budgets. He is also in charge of recommending department tools, systems, and procedures to improve project execution efficiency, as well as employee development, staffing, and project support. Jim earned a B.S. in building construction from Virginia Tech in 1984, and an M.S. in management from Rensselaer Polytechnic Institute in 1995. He is a registered professional engineer in Virginia and North Carolina, a general contractor, an active CII research team co-chair, and teaches at the University of Houston.

Lloyd Rankin holds a BA in Psychology, an MBA, a PMP (Project Management Professional) and is currently a PhD candidate in Civil Engineering with a specialization in Project Management. Lloyd was employed by Mount Royal College for 25 years and was a tenured professor for the Bissett School of Business in the International Business and Supply Chain Management programs. Lloyd has over 18 years of industry training experience and has delivered numerous workshops on management and project management, quality improvement, and many other topics both locally and internationally. Lloyd was the COAA appointed researcher in the development of WorkFace Planning and his main responsibility as a member of the COAA WFP Committee is to assist in the ongoing development of the WorkFace

Planning Model. Lloyd formed Ascension Systems Inc. in 2001.

Jack Richey brings in over 15 years of Software Sales and Implementation experience, mostly in industry specific ERP systems. Prior to joining Element, Jack held supervisor and management roles in sales, implementation and operations in two of the largest Inventory management companies for the forest industry in North America.

Jen Rizzo is the North American Business Development Manager for AVEVA's Enterprise Resource Management and Construction Management Solutions, based in Houston, TX. She has worked for AVEVA for the past three years in Project Management and Business Development, with a specific focus on Materials Management and Construction Management. She has an operations background after 10+ years in US Naval Shipbuilding and has worked on various software implementation projects in North America. Jen holds a Bachelor Degree from the University of Texas at Austin.

Geoff Ryan is a journeyman pipefitter, Project Management Professional and a WorkFace Planning evangelist. After several Alberta mega-projects as a productivity specialist, Geoff started his own company: Insight-WFP. Geoff and his team now work with owners, engineers, project management teams, constructors and software developers across the globe, helping them to understand and incorporate WorkFace Planning into their culture. Geoff was an active member of the COAA WorkFace Planning Committee between 2004 and 2010 and is chairman and founder of the WorkFace Planning Institute, a not-for-profit association of work-face planners.

Yogesh Srivastava has over 20 years of experience, passionate about exploiting the synergy between Construction, Engineering, and Information Technology. Currently working as manager for WorkFace Planning in construction with North West Redwater Partnership, he is also the Co-Chair in the WorkFace planning committee (COAA) and a member of CII RT 272. He has worked in diverse settings such as Canada, Philippines, Abu Dhabi and India in oil and gas-focused construction management, engineering and implementation of technology systems such as Intergraph PDS and Bentley. He is experienced in multi-office project execution set-ups, site construction interface management, engineering management, managing project data and document deliverables. Yogesh holds a Master in Business Administration (International Business) from the University of Calgary and Bachelor of Engineering (Instrumentation) from the Bombay University.

Ben Swan currently resides in Yorkton Saskatchewan with his wife of 17 years and their 2 love trophies Caleb and Paige. Together Ben and Marlene have built and manage a successful furnished suite business. Ben brings over twenty years' experience in the industrial construction industry serving positions of superintendent to project manager on some of the largest projects executed in the northern Alberta tar sands. His experience in management, coordination of technical, administrative

requirements of large capital projects, combined with his desire to ensure his crews always had the right material tools and information led him to playing a key role in the development of the Reveal suite of Mobile Apps for the constructions front line supervision.

Thomas Kohlruess is Senior Construction Manager at URS Corporation.

Andy Turnbull was born in Fort McMurray Alberta, and some spent some time in his youth in Kerrobert, SK. He graduated from NAIT's Instrumentation Engineering Technologist program. Upon graduation he indentured into the Industrial Instrument Mechanic trade and worked in Saskatchewan until obtaining his red seal status. He then joined SNC Lavalin as a construction inspector for InterPipeline Funds Corridor CPX-1 expansion project. Upon completion of the project he then worked for Transfield Asset Management Services at Suncor's Firebag facility on the E/I maintenance team before starting a position with Element Industrial Services as a Work Face Planner. He has since moved into the role of Training Manager for Element, and is in charge of the development and deployment for Element's training programs.

Glen Warren worked for major construction companies in Canada spanning a career of over 40 years primarily in roles of construction management. His last 17 years were spent with Ledcor Industrial Construction as Vice President - Major Projects, prior to retirement. He remains engaged in the industry in retirement by participating in the WorkFace Planning Committee of the Construction Owners Association of Alberta (COAA), and is also involved in training groups to help implement the best practices we have developed. He has also been a member of five construction teams that provided front end support (construction expertise and planning) for major projects in Western Canada and has first-hand experience with the various barriers encountered which prevented truly successful implementation of work packaging. He is also presently participating as co-chair on a joint initiative between COAA and the Construction Industry Institute (CII) that is attempting to provide a North American standard for implementing work packaging strategies.

Scott Wilson is currently Project Manager and Corporate WorkFace Planning Lead for JV Driver Projects, Inc.