PORTFOLIO

Dave Bradbury

Versatile consultant, technologist, and innovation leader with an extensive 42+ year track record of innovation and leadership across multifaceted projects and diverse industry verticals, including HVAC building services, refrigeration manufacturing, construction, and oil & gas. Proven expertise in engineering design, consultancy, and information management, coupled with a reputation for successfully guiding local and remote teams in complex initiatives of varying scale. Recognised specialist in digital design systems, data strategies, digital twins and the development of cutting-edge applications integrating emerging technologies such as AI and AR. Multilingual professional with a demonstrated history of driving progress and advancements within engineering industries.

CONTENTS

Darbury

Director of Global Operations

USxI Group · Oil & Gas, Canada

KEY ACCOUNTABILITIES

- Accountable for efficiencies within the organisation ensuring value for money for clients & maximising profit internally
- Responsible for efficiencies in the execution centre in Chennai, India with 100+ staff
- Responsible for Account Management (Sales) Team based predominantly in Calgary, Canada (10+ staff)
- Accountable for sales in UK & Europe - breaking open new market for company services
- Managing budget & expectations of the UK & Europe sales
- Client Account Management - bridging the gap between the sales & delivery through efficient execution
- Problem solving on existing projects, ensuring quality results for the client but maintaining internal profit
- AI solutions & implementation specialist for the DataD organisation
- Introducing dashboard reports from existing system via Power BI
- Panellist at Canada EnergyTech Summit in Calgary (April 2026)

FUNCTIONS

Director Decision Maker	Account Management	Emerging Technologies Specialist
Operations in. Canada, UK & India	Fiscal Responsibilities	UK & Europe Sales

ROLES & ACCOUNTABILITIES

Darbury

Senior R&D Manager

ISG Ltd. · UK Construction

KEY ACCOUNTABILITIES

- Administer & configure Autodesk Construction Cloud (ACC)
- Power BI bespoke reports from ACC data, updated daily
- Manage ACC Admin & Technical Products team
- Engage business solutions including budget, plans & ROIs
- Lead knowledge on Digital Twins, robotics, AI & AR in construction
- Create iOS & low-code apps for bespoke AI & AR solutions
- Lead the Citizen Coders group for Microsoft Power Platform
- Active involvement in MMC & DfMA (ESS acquisition)

FUNCTIONS

Digital Twin	AI & Machine Learning	Augmented Reality
Power BI Reporting	Autodesk ACC	iOS Development
BIM 360	Change Management	MoMC / DfMA

Dave Bradbury · dave@darbury.com

Darbury

Manager of Information Management

Nexen & CNOOC · Oil & Gas, Canada

PROJECT ACCOUNTABILITIES

- Manage team of 20 IM staff on all Oil Sands construction projects
- Accountable for standards & governance for all data & documents
- Audit Engineering Contractors for compliance to standards
- Contract & manage off-shore resources for data scraping
- Turn-over project data, validated & correct, to Operations

OPERATIONS ACCOUNTABILITIES

- Accountable for updated Operations projects data & documents
- Validated Operations project compliance to standards
- Managed turn-around & shut-down data preparation
- Managed docs & data needed for work face planning
- Periodic audits to standards for legacy documents & data
- Reporting to Operations leadership on information state

FUNCTIONS

Information Management	Standards & Governance	Document Control
Data Validation	Off-shore Management	Operations IM
Construction IM	Audit & Compliance	Turn-over Packages

Dave Bradbury · dave@darbury.com

ROLES & ACCOUNTABILITIES

Darbury

Senior Systems Implementor

CADComp DataCAD · UK Engineering

KEY ACCOUNTABILITIES

- Pre-sales support & product demonstrations
- Producing technical proposals & solutioning ideas
- Customer success scopes for select clients
- Consultancy to clients — owner/operators, engineering & GCs
- Understanding business processes to offer solutions
- Providing budget, plan & schedule for sales team
- Creating bespoke applications to transition client data
- Travel throughout UK; client training including in French (France)

FUNCTIONS

Pre-sales & Consulting	Technical Proposals	CAD Systems
Bespoke App Development	Training & Delivery	Data Migration
Engineering Software	Plant Design	Client Success

CLIENT EXAMPLES

Dow Corning	Shell UK	Huntsman Tioxide
Fluor Canada	British Gas	BP
ExxonMobil	Jacobs	Amec

Dave Bradbury · dave@darbury.com

PROBLEM SOLVING

Darbury

Incompatible Software

Fluor Canada · Petro-Canada Fort Hills · 2004

PROBLEM

Fluor Canada was invited to bid on part of Petro-Canada's $12B Fort Hills plant using OptimEyes (proprietary system), but the client required delivery in AutoPLANT/AutoCAD format — with no direct conversion path between the two systems.

PROPOSED SOLUTION

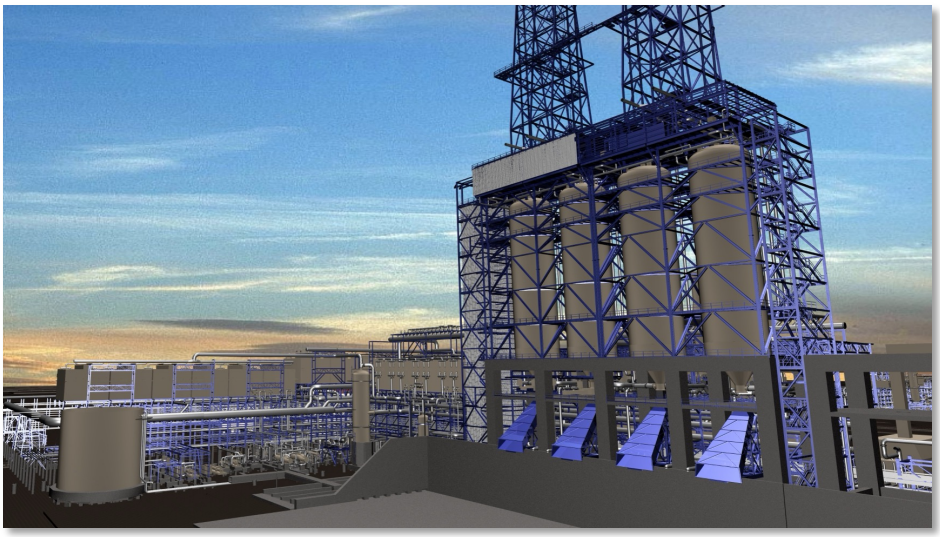
Dave Bradbury proposed a two-pronged approach: Fluor would design in OptimEyes (preserving its standards), while a custom Visual Basic program converted the data to AutoPLANT script. Developed in stages (structural steel → equipment → pipes), it validated data, flagged issues, and was delivered via a 3-month plan with weekly sprints. Board approved the proposed cost.

Translated in 2.5 hours:

2,500 pipelines · 150 pieces of equipment · multiple steelwork members

OUTCOME

Fluor's bid won them the scope. Dave Bradbury received a special financial award and client commendation for ingeniously leveraging software to solve the problem. He then trained designers on AutoPLANT for continued design through project completion.



Dave Bradbury · dave@darbury.com

April 2026

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Resistance to Change

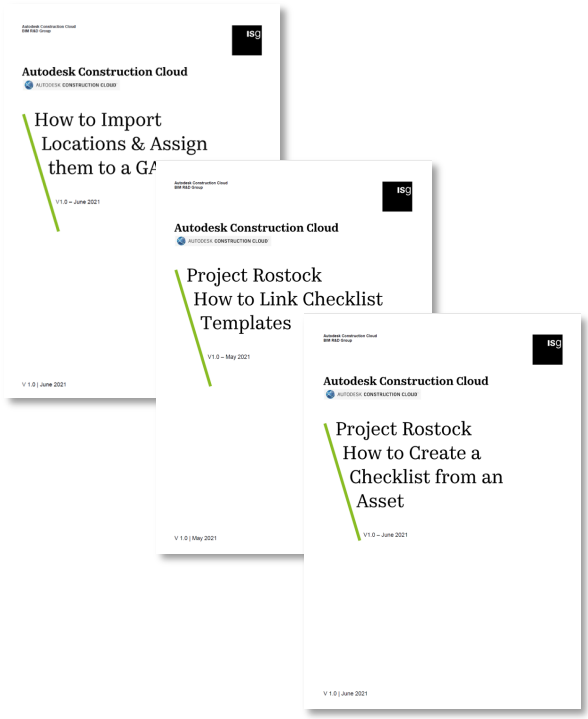
ISG Ltd. · Autodesk Construction Cloud Rollout

PROBLEM

ISG signed an Enterprise Agreement with Autodesk for BIM360 / ACC, but projects resisted adopting the products. Dave Bradbury was tasked with overcoming resistance and implementing the suite on two key projects.

HOW IT WAS ACHIEVED

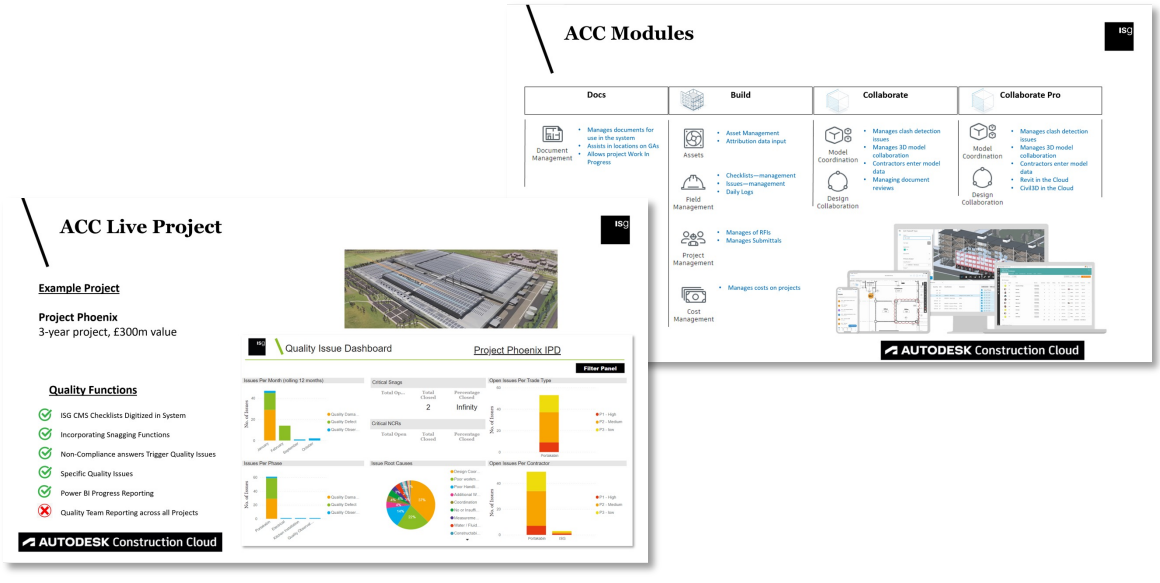
- Met with Project Directors & Managers to understand concerns
- Established minimum adoption criteria, agreed with all parties
- Broke each criterion into processes, documentation, training & resources
- Detailed budget, schedule & work impacts shared and planned
- Set up Power BI reports to showcase additional benefits



FEEDBACK & ENGAGEMENT

Regular feedback was gathered from leadership and implementation teams, shared transparently so the entire team felt engaged and could track adoption progress.

Result: Successful ACC adoption across 2 key projects. Change management methodology used as best practice across ISG.



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Client Value-Add Examples

Bespoke software solutions and data migrations delivering measurable time and cost savings across multiple clients and industries.

DIGITAL ENGINEERING

Fluor / Petro-Canada

OptimEyes → AutoPLANT 3D conversion. 2,500 pipelines, 150 equipment & multiple steelwork members translated in 2.5 hours via custom VB program.

DATA MIGRATION

Dow Corning

PDMS pipe routes translated to AutoPLANT 3D model. Re-purposed Isogen output files saving over 2,000 hours of draughting changes.

SOFTWARE SOLUTION

Huntsman Tioxide

Wrote routine to repurpose 1 machine as an Acrobat server. 50+ users printed to PDF using a single license, eliminating per-seat cost.

DATA INTEGRATION

Shell UK

Wrote AutoPLANT 3D BOM input files for SAP. Data exported directly from 3D models — validated and auto-created SAP input files, eliminating manual re-entry.

AUTOMATION

Huntsman Tioxide – Cable DB

Electrical discipline maintained an Access database of cable connections. Wrote a routine extracting 2,500 DWG files in 1 hour based on templates.

Dave Bradbury · dave@darbury.com

TECHNOLOGY & INNOVATION

Darbury

Agentic AI & AI Vibe Coding

Dave Bradbury compiled his first AI models in 2017 (using TensorFlow) for use with Computer Vision & since then, has been heavily in to the emerging technology arena of Agentic AIs. These are a few of the Agentic AI produced or AI-enabled applications.

AUTOMATION SCOPES

AutoCAD Plant MCP Server

The first MCP server being built for interaction between LLMs & AutoCAD Plant, 3 years before the vendor Autodesk attempt it.

PDF Document to AutoCAD DWG Converter

Traditional PDF converters fail at many of the AutoCAD native object translations; this converter is written by Darbury that understands the entire AutoCAD object base level.

AutoCAD Line Text to MText Objects

Certain conversions produce text made of lines not AutoCAD native Text or MText objects. This app uses OCR to convert the appearance of text to AutoCAD native objects for later editing.

AutoCAD Block Replacement

Anywhere standards are updated within a company, this app gives a simple mapping from old drawing block content to revised ones, including full attribute retention.

iOS & MacOS SCOPES

COG - Centre of Gravity Calculations

Calculate the Centre of Gravity based on the loads & positions on a frame.

Baseframe Analysis & Calculations

Analyse a steel baseframe, one member at a time. Calculate deflections deflections & stress with a full engineering report output.

Darbury Augmented Reality - Refrigeration Unit

See & interact with a real 3D industrial refrigeration system. Place the unit on the ground, zoom to scale & interrogate individual components.

WEB SCOPES

Darbury Management Tool (DMT)

A web tool built by Agentic AI to manage all companies, Projects, Scopes & Issues. A true Project Management tool to assist in scope completion.

AI Portfolio

An interactive example of AI-enable applications for users to benefit from.

Darbury Web Chat Bot (Haiku Enabled)

Anthropic Haiku LLM-enabled web chat bot to assist with answers & directions for the users of the Darbury websites.

Dave Bradbury · dave@darbury.com

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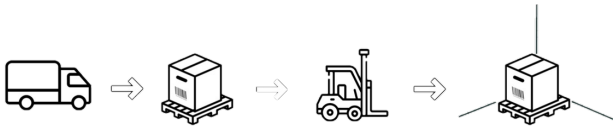
Material Handling with ACC

Overview

The client required an efficient system to manage site-shipped materials with a centralised data source providing visibility into status and storage locations. Dave Bradbury repurposed the existing ACC system to track and manage each pallet of material arriving on-site.

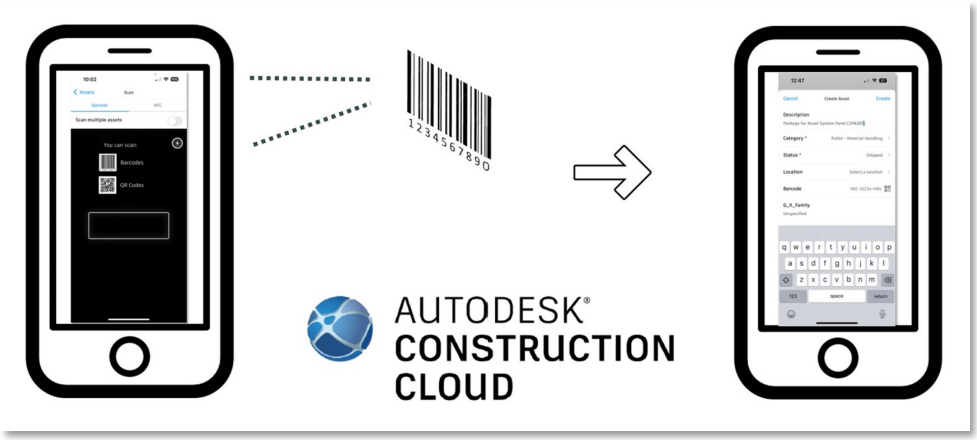
How It Works

- Leveraged existing shipping barcodes — no new tags required
- Each storage / lay-down location identified and mapped in ACC
- Materials tracked through unboxing via existing vendor barcodes or NFC tags
- Real-time, permission-based visibility for all stakeholders via mobile devices
- Comprehensive reports generated to track materials not yet installed



KEY BENEFITS

Reduced time to locate materials	Reduced "missing" item contractor charges	Mobile-first, real-time tracking	No new barcodes — reuses existing tags



Dave Bradbury · dave@darbury.com

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Everest Sciences — 3D Model Upgrade

AutoCAD Plant 3D & P&ID Implementation

CLIENT SCOPE

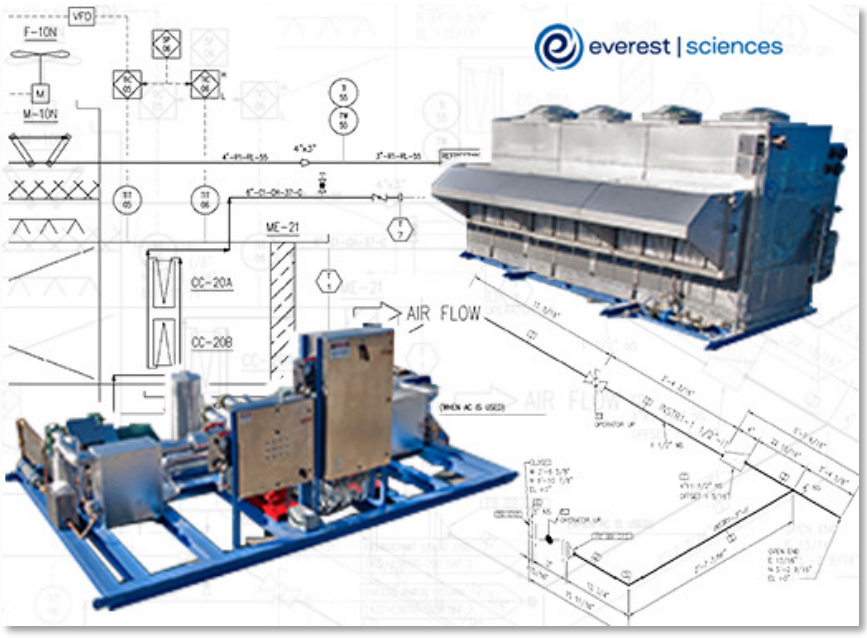
- Introduce intelligent design & re-use across projects
- Incorporate client standards into design environment
- Create a default project configuration & database
- Add client-specified configuration overlays

CLIENT BENEFITS REALISED

- Reduced time to create new projects
- Modular approach brought consistency of equipment & materials
- Asset "just-in-time" delivery realised
- 2D drawings exported directly from model & database
- Consistent reporting across all projects

TECHNOLOGIES USED

AutoCAD Plant 3D	AutoCAD P&ID	Project Configuration
Database Management	Modularisation	2D Drawing Export



Dave Bradbury · dave@darbury.com

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Refrigeration 3D Design

AutoCAD Plant 3D & Autodesk Inventor

PROJECT OVERVIEW

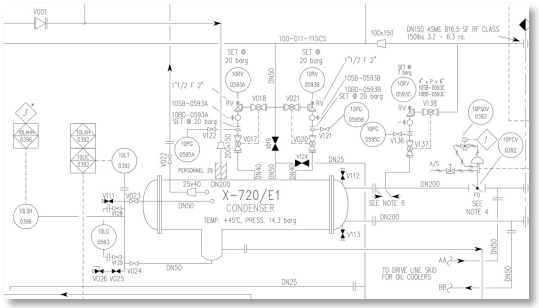
Redesign of a refrigeration unit Dave Bradbury originally designed and manufactured in the mid-1990s for York International. Updated to refrigeration-specific line classes and valves, leveraging Autodesk Inventor for large items like the compressor.

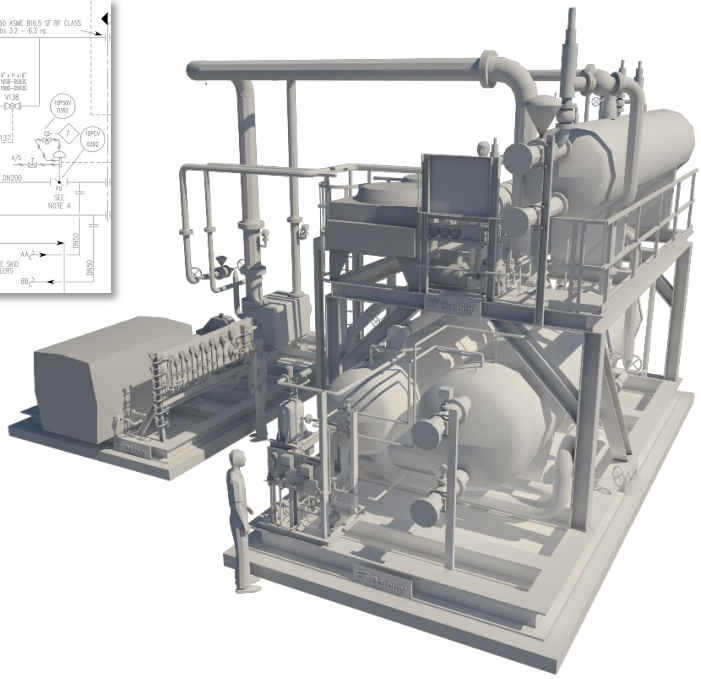
BENEFITS REALISED

- Principles of Modularisation & DfMA applied throughout
- Inventor shrink-wrap function exported graphics to Plant 3D
- Traditional documents extracted directly from 3D model
- Reports generated directly from model database
- High-quality images via Autodesk Cloud Rendering system

TECHNOLOGIES USED

AutoCAD Plant 3D	Autodesk Inventor	Cloud Rendering
DfMA Principles	Modularisation	Line Class Spec





Dave Bradbury · dave@darbury.com

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Augmented Reality Examples

Dave Bradbury has been involved with Augmented Reality using both Microsoft HoloLens and Apple iOS devices for a number of years — producing fully functional applications for industrial use cases.

APPLE IOS

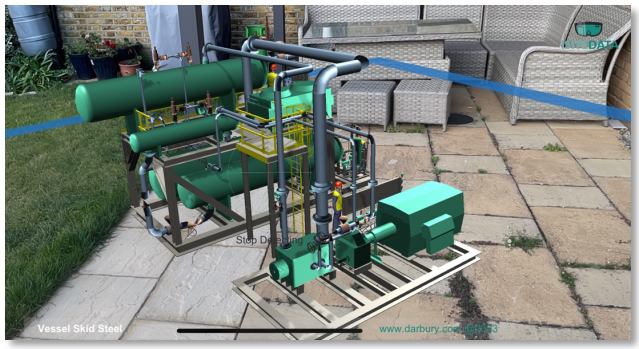
iPhone AR App

User selects a plane and the 3D model is fixed in place. Using crosshairs, asset information is displayed in the bottom-left of the screen. Leverages iPhone's LiDAR sensor for precise placement.

MICROSOFT HOLOLENS

HoloLens AR App

User selects a point to place the 3D model using the HoloLens. As the user moves, live cloud data is shown in visual information boxes. Spatial awareness enables precise overlay on physical equipment.



TECHNOLOGIES

Apple ARKit	Microsoft HoloLens	iOS Development
Unity 3D	iSiteData Platform	Asset Information

Dave Bradbury · dave@darbury.com

April 2026

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Reality Capture — LiDAR & Drone

Dave Bradbury is a qualified drone operator and uses the device to capture video and 3D models of facilities. Using the capabilities of iOS LiDAR sensors, he is investigating advanced methods of using the data in construction and design.

CURRENT DEVELOPMENT SCOPES

LiDAR to 3D Formats

Converting iOS LiDAR point clouds into industry-standard 3D model formats for use in design.

Point Cloud Analysis

LiDAR point cloud positional analysis for as-built verification and construction quality assurance.

Drone Photogrammetry

Best practices for drone-captured photogrammetry, producing accurate 3D facility models.

HoloLens Scanning

Enhancing HoloLens scanning workflows for improved spatial data capture and AR overlay accuracy.

Dave Bradbury · dave@darbury.com

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Asset Information Management (AIM)

Whilst working in the Canadian Oil & Gas industry, Dave Bradbury was accountable for all aspects of Information Management — not just Document Control — on live Operational facilities.

What is AIM?

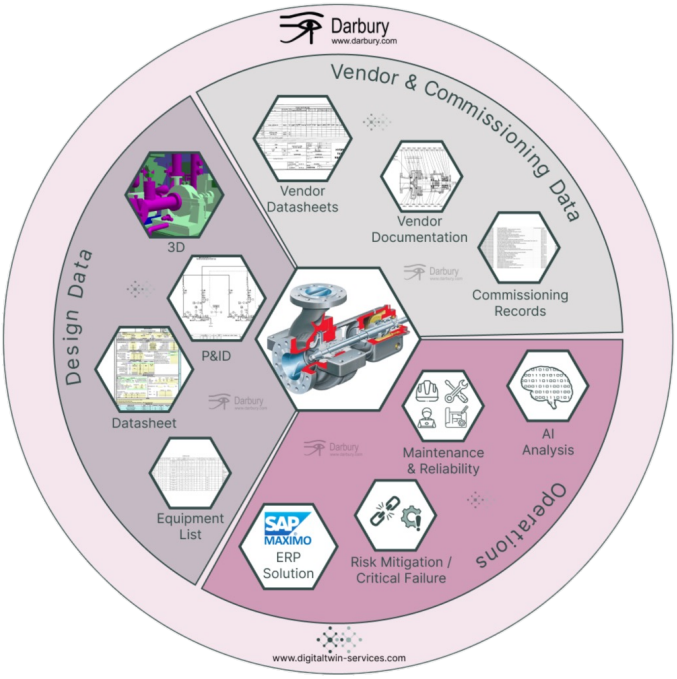
AIM is the discipline of understanding how to combine Document-centric Project Information with the Tag-centric Operations model — covering everything from new facilities to retrofitting of existing plants and buildings. This is the foundation level for Digital Twins.

KEY RESPONSIBILITIES

- Combined document-centric project IM with tag-centric operations
- Governance of all asset data across construction & operations
- Turn-over packages: validated, correct, handed to Operations
- Foundation work for Digital Twin implementation
- Standards creation for information management compliance

AIM IMPLEMENTED FOR

Nexen / CNOOC	Shell UK	Huntsman Tioxide
Fluor Canada	Dow Corning	Everest Sciences



Dave Bradbury · dave@darbury.com

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Digital Twin Implementation

Dave Bradbury has been involved with Digital Twins and their predecessors for 10+ years. He operates a dedicated website to improve accurate knowledge and discussion of the subject.

www.digitaltwin-services.com

At Industry Level

- Showing that Digital Twins have different definitions across industries
- Consulting to Oil & Gas industry on best practices
- Held board-level discussions about Digital Twin definition
- Assisting ISG with standard bid responses for DT scopes
- Proposed new consulting group for client best-practice guidance

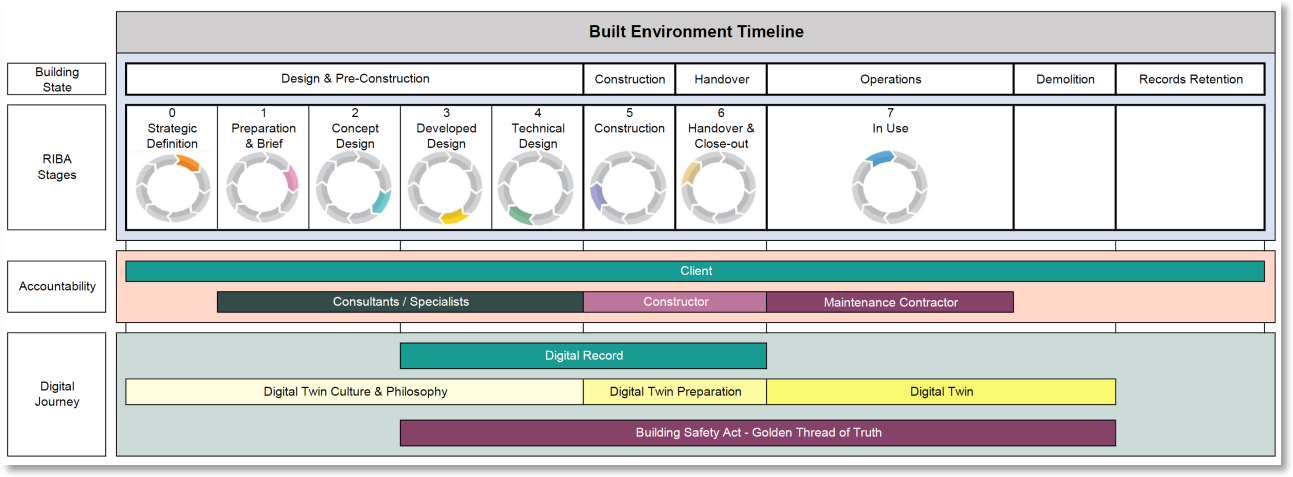
www.digitaltwin-services.com

At Nexen (Completed Digital Twin – 2016)

- Completed early Digital Twin for Long Lake site (@2016)
- Used 2D drawings, spreadsheets & live plant data
- One of the earliest operational DT implementations in Oil & Gas

DIGITAL TWIN CAPABILITIES

Digital Twin Strategy	AIM Foundation	Standards & Governance
Operations Integration	Consulting & Advisory	2D to 3D Conversion



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MoMC, DfMA, Robotics & Sustainability

During the recent employment with ISG, Dave Bradbury was working on the following emerging technologies in conjunction with selected sites and the ESS (modular fabricators) acquisition.

METHODS OF MODERN CONSTRUCTION (MOMC)

- Off-site Modularisation & early engagement with contractors
- Material Tracking solution using ACC (demo'd on Google KGX1)
- Using manufacturing experience to assist ESS with AR solutions

DESIGN FOR MANUFACTURING & ASSEMBLY (DFMA)

- Advising on initial increased cost — DfMA ROI analysis
- Defining material selection & standardisation approaches
- Directly engaged with Material Passports on Google KGX1 project

ROBOTICS & AUTOMATION

- Review of vendor robotic capabilities on construction sites
- Analysing IT requirements per machine
- Pilot projects of HoloLens & HP SitePrint on live sites

SUSTAINABILITY

- Passport fields defined within ACC for Material Passports
- Using NFC tags for ACC Asset tracking on sustainability goals
- Directly engaged with Material Passport standards on KGX1

Dave Bradbury · dave@darbury.com

GET IN TOUCH

Let's Build Something Together.

Consulting, strategy, digital twin, AI implementation, information management standards — Dave Bradbury and the Darbury team are available for projects of all scales.

Contact

Dave Bradbury

Managing Director & Owner

dave@darbury.com

(+44) 07490 480020

Essex, UK

Online

www.darbury.com

www.digitaltwin-services.com

linkedin.com/in/darbury

@dgbradbury

CORE COMPETENCIES

Information Management	Digital Twin	AR / iSiteData
AI Prompt Engineering	Autodesk Development	iOS Development
Digital Construction	Standards & Governance	Asset Data Management
Power BI Reporting	Change Management	Data Integration

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April 2026