



IPLOCA

INTERNATIONAL PIPELINE & OFFSHORE
CONTRACTORS ASSOCIATION



INNOVATION COMMITTEE – Novel Construction Initiative
Spring Session 2024 – Windsor (United Kingdom)

www.iploca.com

Introduction & Objectives of Spring Session

Bruno Pomaré
IPLOCA - Director Europe
Mediterranean



Spiecapag - Business Development
Director

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- Windsor 2004
- Novel Construction History
- RTS: Road To Success!
- What's next?

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Windsor 2004



Objective: identify innovation, improve HSE, cost efficiency Presentations:



NEW & NOVEL CONSTRUCTION METHODS WORKSHOP



List of attendees Presentations Photographs

Venue: Castle Hotel, Windsor, UK 24-25th June 2024

- Graham Freeth BP (Introduction) ● SDGv5
- Graham Freeth BP (Way Forward) ● BP-IPLOCA workshop output v2
- Jacques Laurijssen BECHTEL
- Luc Henriod IPLOCA
- Marco Laurini LAURINI OM
- Marty Col RAHCO
- Nick Lenstra COLT ENGINEERING
- Norman Sanderson BP
- Paul O'Connel J.P.Kenny
- Ricard Espiner BP
- Ron Hochstetler SAIC

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- 24 & 25 June 2004
- 57 people:
 - 10 client
 - 13 contractor
 - 20 engineering
 - 11 eqpmt supplier
 - 3 Iploca
- But no woman...

 **NEW & NOVEL CONSTRUCTION METHODS WORKSHOP** 

List of attendees Presentations Photographs **Venue: Castle Hotel, Windsor, UK 24-25th June 2204**

First Name	Surname	Job Title	Organisation	Address
Paul	Andrews	Project Management Team	Fluor Ltd	Fluor Centre, Riverside Way, Watchmoor Park, Cambe
Nabil	Awadi	Director Onshore Pipeline Engineering	Paragon Engineering Services Inc.	10777 Clay Road, Houston Texas 77041 5497
Lars	Bangert	Manager Pipeline Group	ILF Beratende Ingenieure GmbH	Werner Eckhart Strasse 7, Munich D-81802, Germany
John	Barr	Consultant	KBR	Hill Park Court, Springfield Drive, Leatherhead, Surrey
Peter	Belford	Construction Consultant	Ford Associates	10 Leconsfield Ave, London SW13 0LD
Raymond	Burke	Pipeline Consultant	Shell Global Solutions International BV	Volmerlaan 8, 2280 AB Rijswijk, The Netherlands
Fraser	Christie	Project Manager	JP Kenny Ltd	Thames Plaza, 5 Pine Trees, Chertsey Lane, Staines,
Martin	Col	Director of Concept Engineering	RAHCO International Ltd	PO Box 7400, Spokane, Washington, 99207 USA
Nick	Cooper	Managing Director	MG Bennett & Associates	Bennett House, Plassey Road, Whiston, Rotherham,
Paulo	Amorim		GDK S.A	Rua da Grecia 08 Ed. Serra da Raiz 6º andar - 40010-
Graham	Duncan	Pipeline Project Engineer	Fluor Ltd	Brasil
Regis	Ega		Catepillar Belgium SA	Fluor Centre, Riverside Way, Watchmoor Park, Cambe
Richard	Espiner	Pipeline Engineer	BP Exploration	1 Avenue des Etats Unis, Gosselies, Belgium
Adolf	Feilzmayr	General Manager	ILF Beratende Ingenieure GmbH	Chertsey Road, Sunbury on Thames, Middlesex TW16
Graham	Freeth	Consultant	BP	Werner Eckhart Strasse 7, Munich D-81802, Germany
Stephen	Gower	Pipeline Specialist	BP Exploration	Chertsey Road, Sunbury on Thames, Middlesex TW16
Luc	Henroid		IPLOCA	Chertsey Road, Sunbury on Thames, Middlesex TW16
Trevor	Hill	Team Leader, Pipelines Team	BP Exploration	400 Virginia Ave SW, Suite 400, Washington DC 2000
Ron	Hochstetler	Senior Systems Engineer	SAIC	Chertsey Road, Sunbury on Thames, Middlesex TW16
Mark	Howard	Technology Unit Leader	BP Exploration	Hill Park Court, Springfield Drive, Leatherhead, Surrey
John	Hutt	Project Director	KBR	76 Route de Frontenex, 1206 Geneva, Switzerland
Marco	Jannuzzi		Caterpillar SARL	

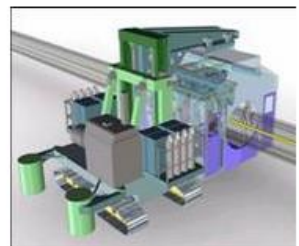
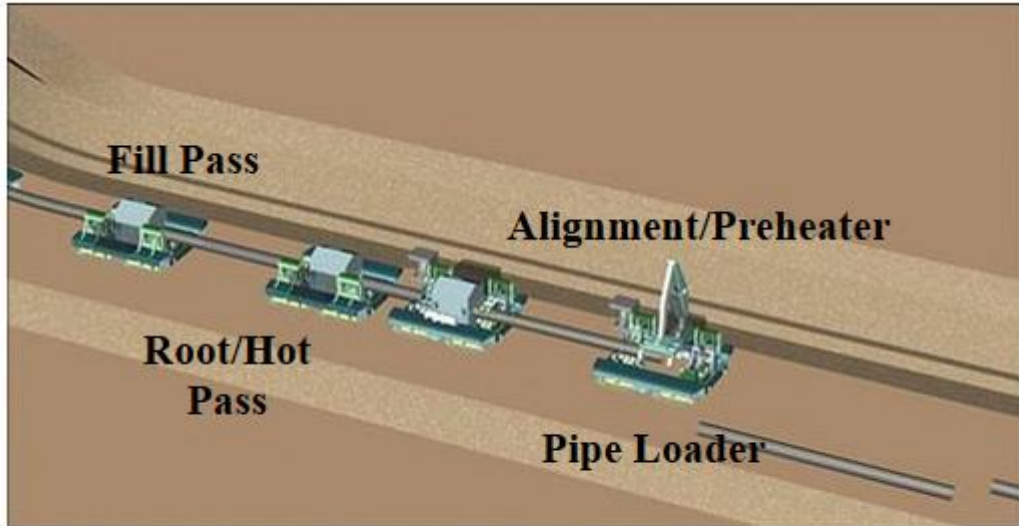
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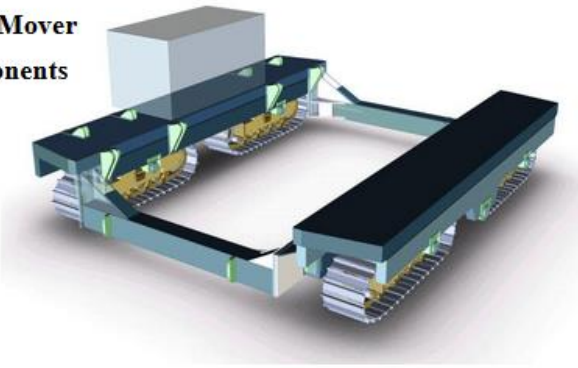


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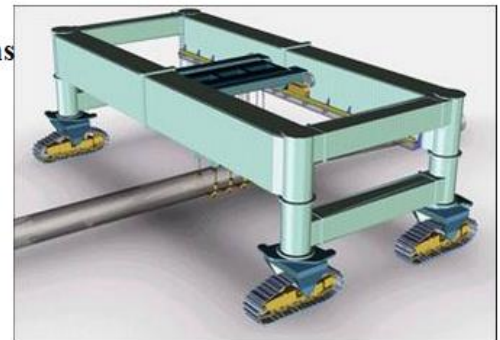
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- Common Prime Mover
- Common Components
 - Engine
 - Generator
 - Tracks
 - Frame
 - Controls
 - Pipe Supports

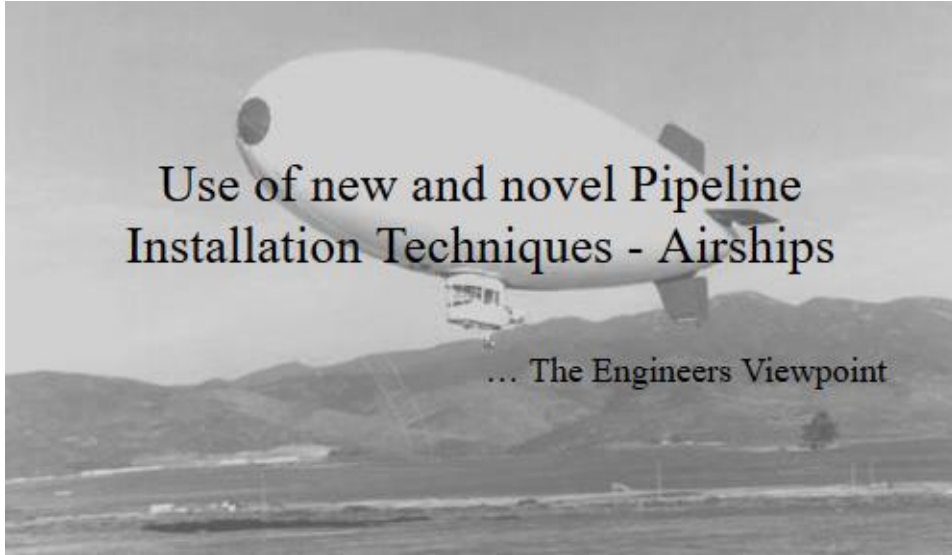


- Crawler Tracks well away from trench
- Can Lift 125 Tons
- 19-35 psi



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Airship Characteristics

- 1 cu. Meter of Helium lifts 1 kilo
- High flight endurance
- High in-flight stability
- High payload volume
- Low aerodynamic constraints
- Low fuel consumption
- Low exhaust emissions
- Low vibration & noise
- Low speed (85 mph max)
- Low operating cost



Hybrid-lifting body concept



81 foot Spherical airship



USS Macon over mast



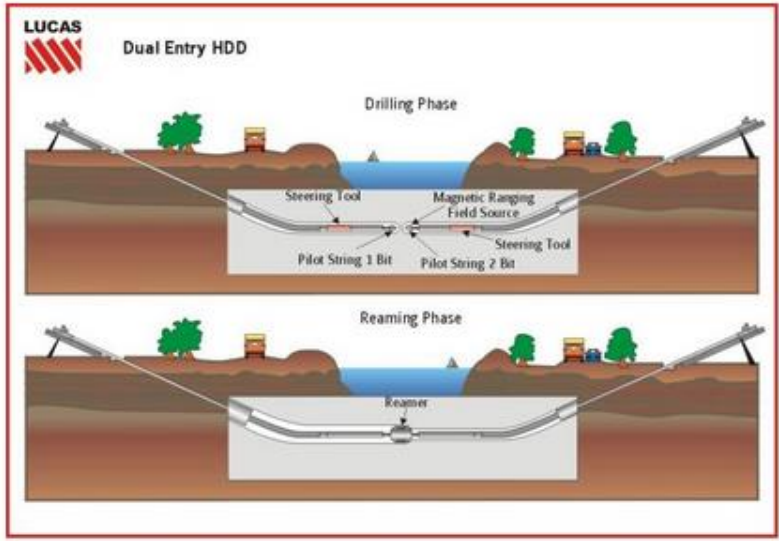
DynaLifter Hybrid-winged concept



Lenticular Russian Airship

Airship Types

- Conventional ellipsoid
- Spherical & Lenticular
- Hybrid-rotary
- Hybrid-winged
- Hybrid-lifting body



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New and Novel Construction Methods The Way Forward



Selected ideas

Idea	Scope
1	RAHCO/Land Train
2	Mechanical Connections *
3	Combined theme around single welding/longer pipe lengths/push-pull...
4	Sky Hooks and LTA applications
5	Camps
6	Tie-ins
7	HDD v Open Cut (Environmental)
8	Standards – Best Practices
9	Pipe Supports**

*Post meeting note1: **Mechanical Connections** will form part of a Materials Study, not part of New and Novel Construction Methods scope, therefore promoting Tie-ins to 5th Place.

First Priority

Second Priority

**Post meeting note2: Pipe supports will be included as an element of the combined theme # 3



NOVEL CONSTRUCTION HISTORY

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New and Novel Construction Methods The Way Forward



IPLOCA – BP Novel Construction Methods

Core Group Workshop
Cergy-Pontoise March 29, 30, & April 1 2005

DRAFT Meeting Notes

**THE LAND TRAIN CONSTRUCTION PROCESS:
An Enabling Technology for the Construction of
Onshore Pipelines**

Attendance

Luc Hennod	IPLOCA (part time)
Roberto Pirani	IPLOCA
Graham Freeth	BP
Leyla Faisal	BP
Jacques Laurijssen	BP/Bechtel
Bernard Quereillach	Amec-Spie Capag
Bruno Pomare	Amec-Spie Capag
Hisham Kawash	CCIC
Zuhair Haddad	CCIC
Graham Duncan	Fluor
Siegmond Huber	Max Streicher
Bob Wood	MG Bennett (part time)



**Novel Construction Methods
RECOMMENDATIONS FOR NOVEL
POST-EXCAVATION TECHNOLOGY
CONCEPTS AND METHODS
(INTEGRAL TO THE LAND-LAY-TRAIN)**

J P KENNY

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CONSTRUCTION MEETING IPLOCA OFFICE GENEVA, 14 NOVEMBER 2006

4) Memorandum of understanding

We, Bruno Pomaré Amec Spie Capage (ASC), Richard Large Bechtel, Ian Neilson BP, Marco Jannuzzi Caterpillar, Hisham Kawash and Zuhair Haddad CCC, Graham Ducan Fluor, Luc Henriod IPLOCA and David Williams Serimer have formed a committee under the auspices of IPLOCA Geneva named: **the Novel Construction Group**. The purpose of this committee is to provide direction to the pipeline industry to improve efficiency, safety, environmental and social performances, quality and reliability predictability of pipeline projects.

The members will achieve their objectives through creation of deliverables and road maps. A sub-committee (team) will be created for each deliverable each with its own team leader approved by the Novel Construction Group.

The committee and each sub-committee will be self-financing.

The members of the committee and the sub-committees will be cooperating in an R & D environment and will respect all relevant guidelines for competitive rules and regulations nationally and internationally.

Confidentiality and intellectual property will be guaranteed.

The Novel Construction Group committee is composed of 9 members, 7 companies all IPLOCA members, Amec Spie Capag, Bechtel, Caterpillar CCC, Fluor, Serimer, one operator BP and one association IPLOCA. Any decisions have to have a simple majority, assuming two third of the entities forming the committee are present. New members will have to be operators or IPLOCA members and be approved by the committee. Members are free to leave at any time, confidentiality rules and regulations will apply.

IPLOCA has been elected to perform the secretariat role for Novel Construction Project.

COSTRUTTORI SEMINARIO A BUSSETO

Tecniche innovative per i metanodotti: meeting alla Laurini



Busseto Il gruppo di lavoro internazionale ospitato da Marco Laurini.

■ L'Associazione internazionale di costruttori di metanodotti e oleodotti (Iploca), con sede a Ginevra, riunisce le più importanti imprese del settore a livello mondiale e un gran numero di fornitori.

Tra le aziende costruttrici, a fianco di grandi realtà come le americane Bechtel e Willbros, l'argentina Techint, la francese SpieCapag o la russa Stroytransgaz, spiccano ditte italiane quali Saipem, Bonatti, Sicim, Ghizoni. E tra i fornitori troviamo altri colossi: Caterpillar, Volvo, Komatsu ed anche ditte italiane specializzate nel settore come la

Tesmec di Bergamo e la Laurini di Busseto. L'associazione sta sviluppando una ricerca per studiare tecniche nuove per la costruzione dei metanodotti e oleodotti, in gergo: pipeline, con l'obiettivo di stimolare l'innovazione in questo campo. L'iniziativa comprende gruppi di studio ai quali partecipa anche la Laurini.

Proprio recentemente si è svolto a Busseto, ospitato da Marco Laurini (titolare della Laurini srl), un seminario a cui hanno partecipato specialisti del settore provenienti da tutto il mondo per discutere problematiche relative all'innovazione. ♦

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WORKING GROUPS

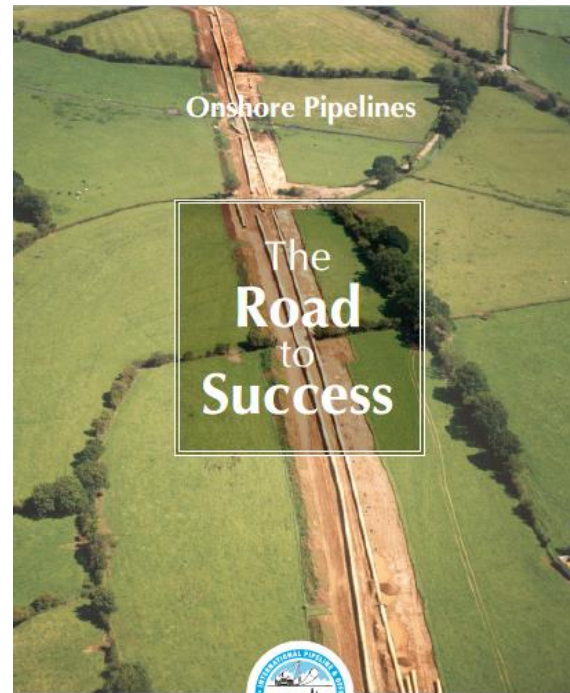
The ten working groups and their leaders are as follows:

- **Planning & Design**
directed by Criss Shipman (Gulf Interstate Engineering)
- **New Trends and Innovation**
directed by Zuhair Haddad (CCC)
- **Coatings**
directed by David Jackson (Pipeline Induction Heat Ltd)
- **Earthworks & Crossings**
directed by Paul Andrews (Fluor) and Bruno Pomaré (Spiecapag)

- **Welding & NDT**
directed by Jan van der Ent (Applus RTD), Frederic Lepia (Serimax) and Benedict De Graaff (CRC-Evans)
- **Logistics**
directed by Bruno Pomaré (Spiecapag) and Bernard Quereilhac (Volvo Construction Equipment)
- **Environment**
directed by Sue Sljivic (RSK)
- **Pre-Commissioning**
directed by Vincenzo Calabria (SICIM)
- **Bending**
directed by Geert Dieperink (Maats BV)
- **Health & Safety**
directed by Alain Gauthiez (Spiecapag)

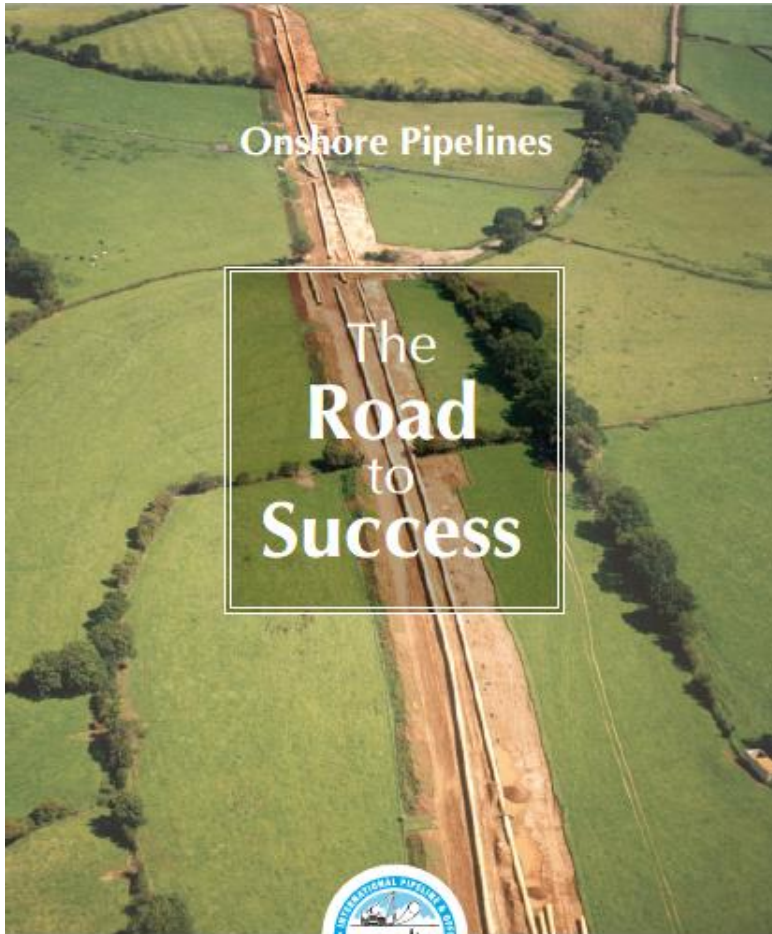
Working Groups	Leader (Company)	Email
Earthworks & Crossings	Ana Cecilia Soares (Petrobras)	ana.soares@petrobras.com.br
Steep Slopes Installation	Matt Granger (Ledcor)	matt.granger@ledcor.com
New Trends & Innovation	Mustafa Abusalah (C.C.C.)	mabusalah@ccc.net
Coatings	Somaieh Salehpour (Seal for Life)	somaieh.salehpour@sealforlife.com
Environment	Katrina Cooper (RSK)	kcooper@rsk.co.uk
Logistics	Jean-Baptiste Rousseau (Spiecapag)	jean-baptiste.rousseau@spiecapag.com
Energy Transition	Andrew Ball (J. Murphy & Sons)	andrewball@murphygroup.co.uk

Road to Success



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IPLOCA
September 2009 - 1st Edition

Printed & CD:

1st Edition - september
2009

2nd Edition - september
2011

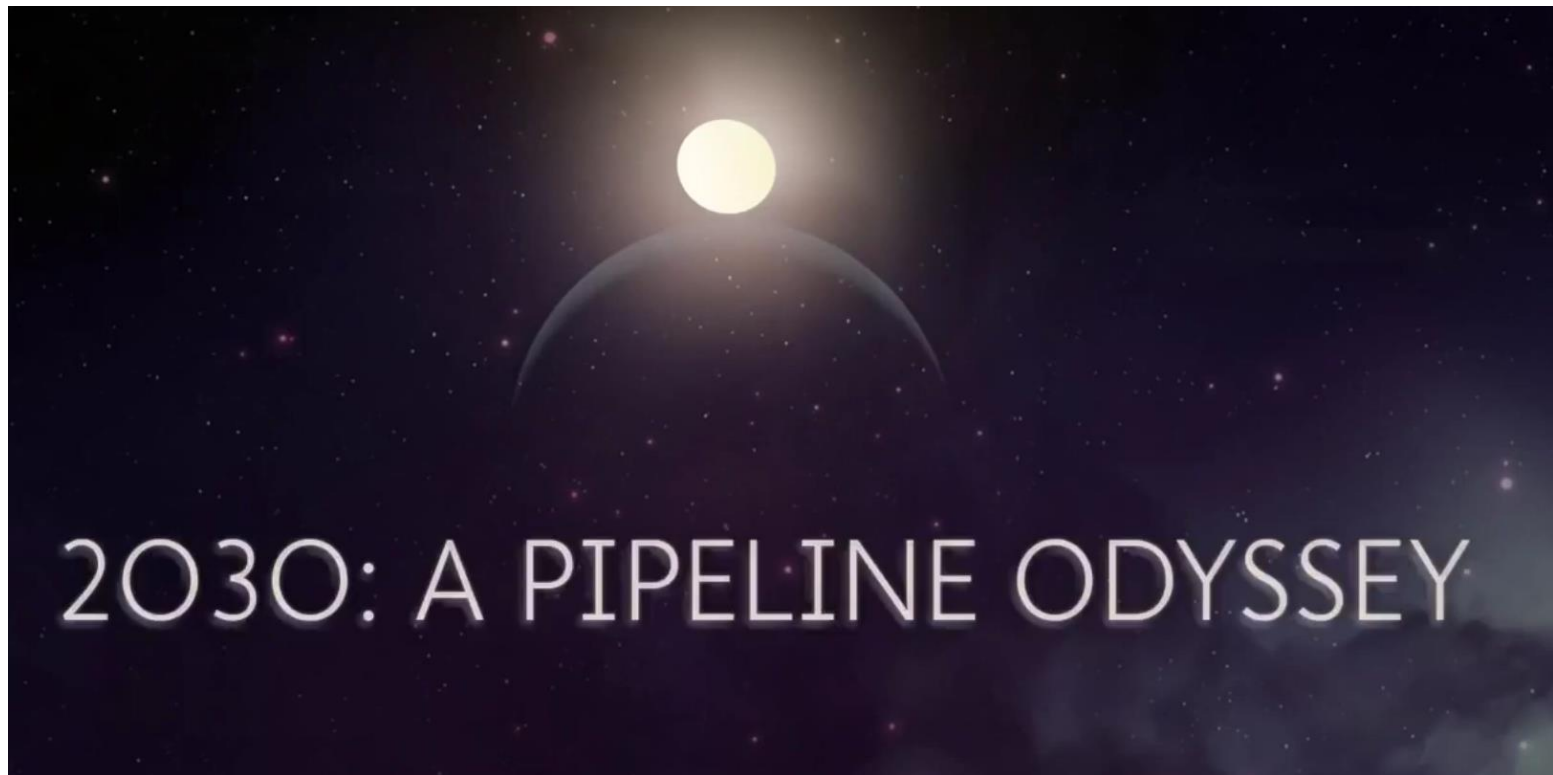
3rd Edition - september
2013

App:

4th Edition: end of 2016

5th Edition: feb 2017

What's next?



2030: A PIPELINE ODYSSEY

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- **RTS IS A GREAT TOOL**
- **WORLD IS CHANGING AND SHIFTING TO GREEN**
- **ENERGY TRANSITION IS A NEW PILLAR OF IPLOCA**
- **WE NEED TO EMBARK ONTO A NEW JOURNEY, FOR THE NEXT 20 YEARS**

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TEASER FOR SESSIONS TO COME:

- AI TRANSFORMATION
- SKILLS AND RESOURCES
- STANDARDS/COMPLIANCE/MATERIALS
- ENERGY TRANSITION
- NET ZERO CONSTRUCTION