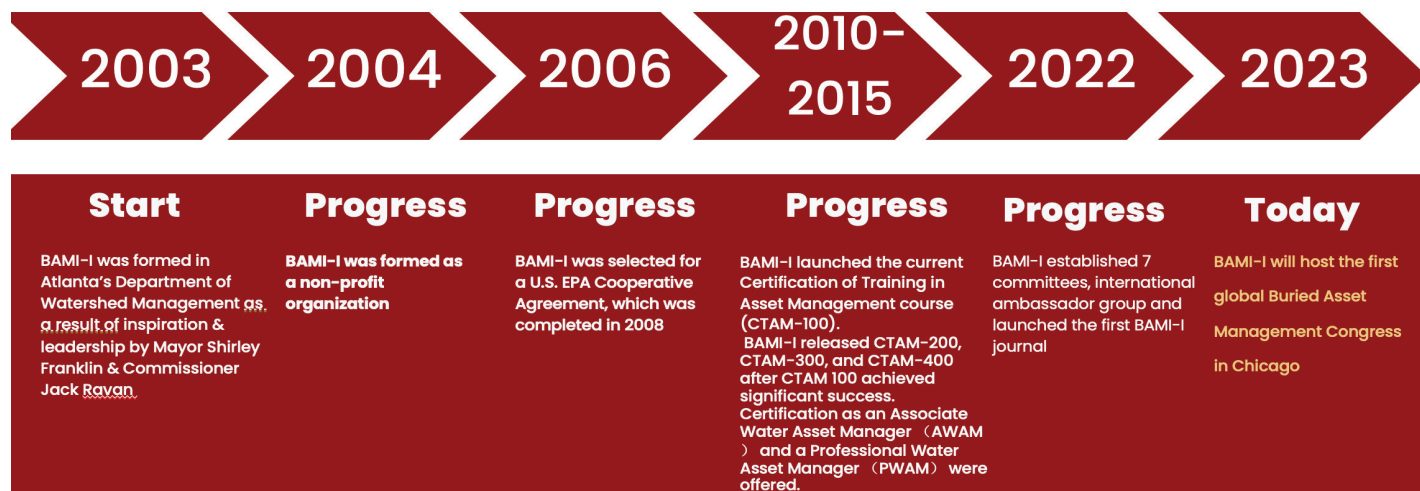


BAMI-I'S JOURNEY OF TWENTY YEARS OF EXCELLENCE IN BURIED ASSET MANAGEMENT

By Wei Liao & Ming Chen



Milestones of BAMI-I



Trenchless Technology Magazine Cover Story: Atlanta's Clean Water Advocates (September, 2003)

In 2003, the Buried Asset Management Institute (BAMI) was established within the Department of Watershed Management (DWM) for the City of Atlanta, driven by the leadership and inspiration of Mayor Shirley Franklin and DWM Commissioner Jack Ravan. Dr. Tom Iseley, the founder of BAMI-I, embarked on this journey in tandem with the City of Atlanta's DWM.

During the period Dr. Tom Iseley was in DWM, Atlanta grappled with the challenges

associated with advancing a consent decree program. Mayor Franklin articulated a visionary path: not merely to meet the stipulations of the consent decree, but to ascend as an industry leader deserving of Atlanta's citizens. This vision was effectively communicated. Collaborating with Commissioner Ravan, Dr. Tom Iseley worked ardently to translate this vision into reality. This impelled them to delve deeper into asset management research and comprehension. Evidently, the city's principal obstacle extended beyond surface-level infrastructure; the true challenge lay within the underground infrastructure. Shirley Franklin aptly termed it a "buried treasure," underscoring its significance. Meanwhile, the Environmental Protection Agency (EPA) was engaged in supporting water utilities. Asset management advocate Steve Albee played a pivotal role. Steve Albee's mid-90s gap analysis underscored the importance of asset management, exposing the disparity between investment and demand within the water sector. His role primarily encompassed offering support and gleaned insights from diverse countries, particularly New Zealand and Australia, an experience that left an enduring impression. His global travels provided exposure to various countries' approaches to asset management. Upon returning to the

United States, he initiated a series of workshops. Dr. Tom Iseley not only participated in these workshops but also extended an invitation to Steve Albee to assist his team in Atlanta, fortifying the focus on establishing an asset management framework. Through these educational endeavors, Dr. Iseley arrived at the realization that his work at the Trenches Technology Center and his efforts in pipeline condition assessment, while invaluable, would not yield optimal outcomes without integration within a comprehensive, risk-based Asset Management program.

This collaboration embodies the crux of their partnership within DWM. Dr. Iseley's team incorporated academic researchers to not only fathom the problem but also grasp the solution, colloquially referred to as the barrier.

In 2004, BAMI underwent a transition to become Buried Asset management Institute— International (BAMI-I), transforming into a non-profit organization with an independent board of directors. The transformation of BAMI-I in 2004 marked a significant milestone. The purpose and mission at the time of establishment were determined as follows:

BAMI-I's purpose is to educate and as-



BAMI-I CTAM Workshop: UCTA-North Texas - Nov 5 — 8, 2018 - Lewisville, TX

sist those who have an interest in applying best-buried asset management practices to extend the life and efficiency of their assets. Although BAMI-I has been mainly focused on water and wastewater systems, the principles of asset management apply to all different types of buried assets including for instance gas distribution pipes, and electric cables.

BAMI-I's mission is to provide a center of excellence for owners of underground infrastructure to join with industry and researchers, using sound science, to evaluate and / or develop buried asset management protocols for application worldwide to benefit ratepayers and other stakeholders by:

- Protecting public health
- Maximizing asset life-cycle value
- Improving the environment
- Sustaining economic development
- Enhancing the quality of life

This transformation enabled BAMI-I to better address the needs and interests of utility and professional communities and achieve distinctive advancements.

In 2006, BAMI-I was selected for U.S. EPA Cooperative Agreement (CP 83 282901-I), which was completed in 2008. In 2010, BAMI-I launched the current Certification of Training in Asset Management course

(CTAM-100). This course provides a comprehensive introduction to asset management principles and concepts — with special emphasis on their application to “buried assets” associated with sewer and water systems. CTAM's success had created awareness of the need to broaden its initial scope and provide more detailed training in an expanded sphere of utility system concerns. To meet this challenge, three additional training courses were being prepared for release at six-month intervals beginning in 2013. These courses have been named CTAM-200, CTAM-300 and CTAM-400.

- CTAM 100 — Overview of Asset Management which was launched in 2010.
- CTAM 200 — Developing an Asset Management Program which was launched in 2012.
- CTAM 300 — Managing an Asset Management Program which was launched in 2015.
- CTAM 400 — Financing an Asset Management Program which was launched in 2015.

In addition, in response to industry demands, BAMI-I established a certification committee and developed two certification levels: Associate Water Asset Manager and Professional Water Asset Manager.

Most of the contributors of CTAM were

volunteers who were professionals from industry or academia, including Tom Iseley, Jim Raulston, Kurt Wright, Ronald Thompson, Jim Harris, Gregory Baird, Rick Nelson, Bill Di Tullio, Cameron McHargue, Roderick Lovely, Matt Ray, Bernie Krzys, Jim Rush, Mary Beth Butkovic, Greg Chol, Shadi Eskaf, Leonard Ingram, Matt Klein, Mohammad Najafi, Tod Phinney, Saleh Behbahani, Matt Ray, etc.

Since 2015, Saleh Behbahani has been serving as the manager for the online CTAM courses. Under his coordination and promotional leadership, nearly 1,600 individuals from 16 different countries have participated in these courses. Benjiemin Media Company collaborated in the development of CTAM100 and has been actively promoting the entire online course series.

Notably, organizations like the Environmental Organization in North Carolina Division of Water Infrastructure recognized the growing need for assistance in enhancing utility plans within their state. In response, they awarded the organization a contract with BAMI-I in 2015 to conduct four-day courses, each spanning one day, with the aim of training their personnel and other interested individuals simultaneously. This opportunity has allowed BAMI-I to develop customizable classroom courses, tailored to

“What we do **NOW**, will profoundly affect the next few thousand years...”



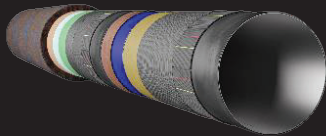
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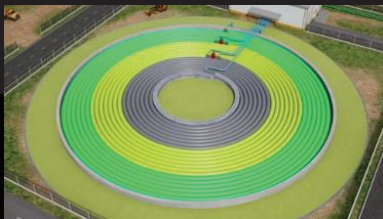
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UIS on-site demonstration session



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specific demands. These significant developments are part of BAMI-I ongoing story, which began to take shape between 2010 and 2015, and continue to evolve. To date, six in-person workshops took place in different States. The upcoming CTAM100-400 workshop which is organized by Back Municipal Consulting will take place from October 30- November 2, 2023 in Cincinnati.

In 2016, Dr. Iseley, in collaboration with James Anspach, a prominent figure in the subsurface utility engineering industry, established the Utility Investigation School (UIS) at Louisiana Tech University. This school offers instruction in accordance with the ASCE 38 standard and initially conducted its classes at Louisiana Tech University. One of the fundamental principles of asset management is understanding what you have and where it's located. This requirement involves precise location and mapping, which prompted BAMI-I to partner with industry experts in the subsurface utility engineering field to address this need. Since the 6th UIS, BAMI-I has successfully conducted this program 13 times in various locations across the country. The upcoming 19th UIS is scheduled to take place in Baltimore, MD from October 16-20, 2023.

In 2022, after two years of preparation, Arlex Toro representing Latin America Society of Trenchless Technology (LAMSTT) and Dr. Iseley representing BAMI-I signed a course collaboration agreement at BAMI-I annual Board of Director meeting to offer the Certificate Course of Mapping and GIS School in the South American region. This is another international event for BAMI-I following the global CTAM online course.

In 2022, under the leadership of Wei Liao, who joined Dr. Iseley's team in 2019, the BAMI-I team began exploring ways to expand the resources related to BAMI-I's core focus. To achieve BAMI-I's mission and realize BAMI-I's vision to a greater extent, it's essential to involve a large number of stakeholders and establish a thriving community. To ensure the realization of BAMI-I's goals, the organization has established seven committees, each with experienced chairpersons. Here are the seven committees along with their inaugural chairpersons:

Trenchless Technology Committee (TT) - Chair: Mark G. Wade.

Pipeline Condition Assessment Committee (PCA) - Chair: Susan Dakak and Jerry Weimer.

Utility Investigation Committee (UI) - Chair: Joseph Murphy.

Financial Management Committee (FM) - Chair: Shah Rahman.

Education & Research Committee (E&R) - Chair: Dr. Andy Chae.

TT-Renewable Energy Infrastructure Committee (TT-REI) - Chair: Kent Weisenberg.

Oil and Gas Committee (O&G) - Chair: Dr.

Hongfang Lu.

Each committee has made progress in recruiting members and formulating development strategies during the first year of establishment.

Furthermore, BAMI-I has formed an international ambassador group comprising approximately ten ambassadors, aiming to foster genuine engagement with the global community. This initiative encourages mutual learning, which in turn has a positive influence on the United States. The initial members of this group include Niranian Swarup from India, Baosong Ma from China, Arlex Toro from Columbia, Sriram Ganesan from Singapore, Robert Stein from Germany, Sam Wiffen from New Zealand, Pinky Tso from Hong Kong, Sergio Palazzo from Brazil, Anna Karpińska-Rzepa from Poland, Tom Sangster from Europe and Binu Jayamohan from United Arab Emirates

To establish a channel for providing valuable information and knowledge to both members and the public, BAMI-I announced the launch of the inaugural digital and print BAMI-I Journal. This is a biannual publication. In collaboration with A to B publishing company, BAMI-I released the first issue of BAMI-I Journal. Subsequent issues of BAMI-I Journal, starting with the second issue, are independently published by BAMI-I. Circulated across the US, and internationally, the BAMI-I Journal has raised awareness of the benefits of utilizing best buried asset management practices, demonstrating with case studies and feature articles how



2022 BAMI-I Annual Board of Director Meeting (July 31st, 2022, Indiana University Purdue University Indianapolis (IUPUI))



BAMI-I Journal

best buried asset management practices maximize the life-cycle of underground infrastructure assets, and provide the basis for sound economic decisions regarding these assets.

As 2023 approaches, marking BAMI-I's 20th year, a significant stride forward is being taken. The inaugural Global Buried Asset Management Congress is slated to be held in Tinley Park Convention Center, Illinois, from September 28 to 30, 2023. This international event will bring together leaders and experts from the global asset management domain to collectively shape the industry's vision and direction.

The development of BAMI-I from its inception to the present day has been inseparable from the unwavering support and dedication of all the volunteers, BAMI-I Members and partners who have been involved. These enthusiastic individuals have contributed their valuable time and energy, tirelessly striving for BAMI-I's mission and providing continuous momentum to BAMI-I's programs and activities. Their selfless dedication showcases the cohesion and shared pursuit of our community, setting a shining example for BAMI-I's growth and development. And it is through partners support and collaboration that help to expand BAMI-I's reach, enrich BAMI-I's resources, and take firmer steps on the path to fulfilling BAMI-I's mis-

sion. Their expertise, resource sharing, and active participation infuse new vitality and creativity into every aspect of BAMI-I's work. Throughout this collective journey, we firmly believe that through the joint efforts of volunteers and partners, BAMI-I will continue to thrive, bringing more value and positive transformation to the industry.

BAMI-I's journey vividly underscores its unwavering dedication to excellence, exemplified by its resolute commitment to education and leadership in the realm of buried asset management. Look into future, the mission and objectives of BAMI-I will keep primarily focusing on the management of underground infrastructure. BAMI-I will consistently strive to promote and advocate for effective practices in asset management, ensuring the long-term reliability, safety, and sustainability of buried assets. Through knowledge sharing and dissemination, formulation of best practices, awareness enhancement, as well as research and innovation support, BAMI-I provides assistance and guidance to professionals and stakeholders in the field of underground infrastructure.

Wei Liao is Lead Research Engineer at Purdue University and Executive Director of BAMI-I. **Ming Chen** is an Assistant at BAMI-I.



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