



Shaping the Future with Impactful Innovation

with Universitas Bandar Lampung



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Prof. Dr. Ir. M. Yusuf S. Barusman, M.B.A.
Rektor Universitas Bandar Lampung

Rector's Foreword

In 2025, Universitas Bandar Lampung (UBL) celebrates its 53rd year of establishment. Founded in 1972, UBL began its journey as the Akademi Administrasi Niaga (AAN) Tanjung Karang, which later transformed into the Akademi Sekretari dan Manajemen (ASM), before ultimately evolving into Universitas Bandar Lampung as we know it today.

Today, UBL stands among the leading universities in Indonesia, particularly in the Southern Sumatra region, as evidenced by the prestigious recognition awarded by the Higher Education Service Institute (LLDIkti Region II) for six (6) consecutive years—2019, 2020, 2021, 2022, 2023, and 2024.

Over the years, UBL has made numerous constructive and impactful contributions to national development, built upon the unwavering dedication and commitment of its academic community. We continue to foster excellence through creativity and innovation, positioning UBL as a leading institution in driving transformative educational initiatives.

Our strengths span across a wide range of disciplines. UBL currently offers 12 undergraduate programs, 4 Master's programs, 1 Doctoral program, and is supported by 24 Research and Study Centers that enrich students' academic experience—expanding their knowledge, strengthening their research capabilities, and enhancing multidisciplinary collaboration and personal growth.

UBL remains deeply committed to providing high-quality education and ensuring access to learning opportunities for the younger generation and the wider community. This commitment is reflected through various scholarship schemes—including Merit Scholarships, Innovation Scholarships, and Social Scholarships—offered up to one hundred (100) percent.

Vision

To Be a World-Class Entrepreneurial University

Mision

- Delivering World-Class Higher Education with an Entrepreneurial Spirit
- Conducting World-Class Research with an Entrepreneurial Spirit
- Implementing Community Service with an Entrepreneurial Spirit at a Global Standard

Introduction



15+

Senior Consultant &
Researcher

20+

Years of Experts
Experiences

50+

Years of University
Credibility

100+

Technology Innovations

Universitas Bandar Lampung (UBL) is a leading higher education institution committed to advancing research, innovation, and community empowerment. **Driven by the mission to bridge academic excellence with real industry and societal needs**, UBL catalyzes transformation by nurturing future-ready talent, fostering impactful research, and delivering innovations that make meaningful contributions to Indonesia and beyond.

Our Services

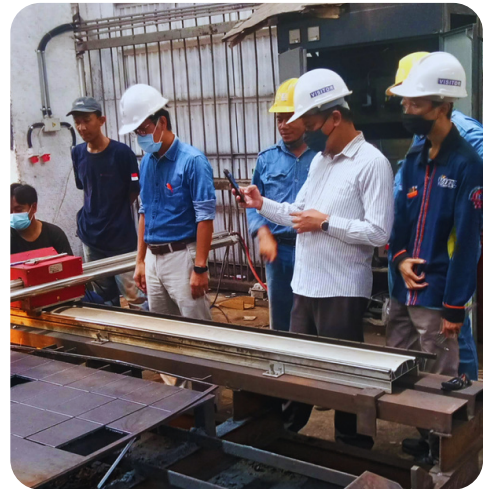


Ready to Use Technology Innovation

Ready-to-use technologies that have been validated for successful implementation and are ready for industrial-scale production. This Company Profile features seven such proven technologies as examples.

Research & Consulting

Professional Research and Consulting Services are designed to address corporate challenges in technology, business, and legal matters. UBL offers flexible collaboration schemes through Industry–University Research Partnerships or tailored professional consulting services to meet specific company needs.



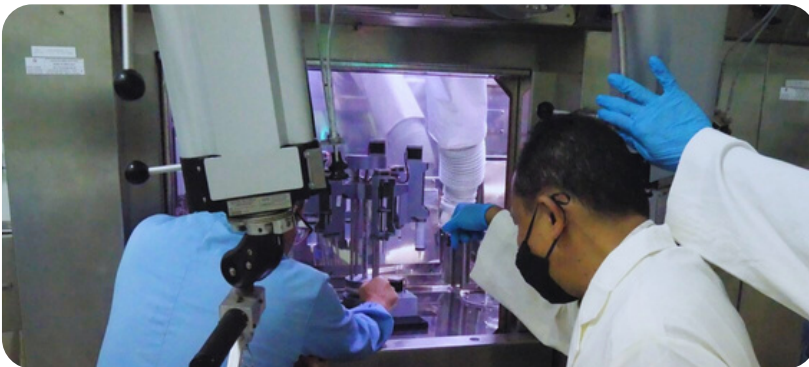
UBL Executive Learning

Corporate Training services that bring together not only expert trainers from UBL's academic community but also seasoned practitioners and professionals from Indonesia's corporate training industry.

Our Services

➤ Ready to Use **Technology Innovation**

Industry-ready technologies that have been fully validated through successful implementation and are prepared for scalable production. This company profile highlights 7 (seven) ready-to-deploy products as representative examples:



**Internet of Things
Integration**



**Process
Optimization**



**Automation
Machinery**



**AI Enabled
Technology**

1 **AGVi (Automated Guided Vehicle Intelligent)**

AGVi is an autonomous material handling vehicle designed to transport and move goods with precision and reliability, eliminating the need for direct human operation.

2 **PlaCut (Steel Plasma Cutting)**

A plasma-based steel cutting machine designed to deliver fast, precise, and highly efficient cutting performance.

3 **VASCE (Fleet Tracking Management System)**

Mesin pemantau keselamatan berkendara yang dirancang untuk meningkatkan keselamatan operasional kendaraan dengan asisten virtual berbasis suara sebagai pemberi sinyal peringatan.

4 **CoalSense (Automated Coal Separation)**

A vehicle safety monitoring system designed to enhance operational safety through a voice-based virtual assistant that provides real-time warning alerts.

5 **Smart Shaker**

Developed to improve the efficiency of tissue culture cloning processes through automated mixing of media and nutrients. The system is also utilized in pharmaceutical and chemical industries for automatic and consistent mixing of chemical substances.

6 **Tanduro (EUDR Compliance Management System)**

An application that monitors deforestation, peatlands, and forest areas in real time to help plantation operators comply with EUDR standards for exports to Europe.

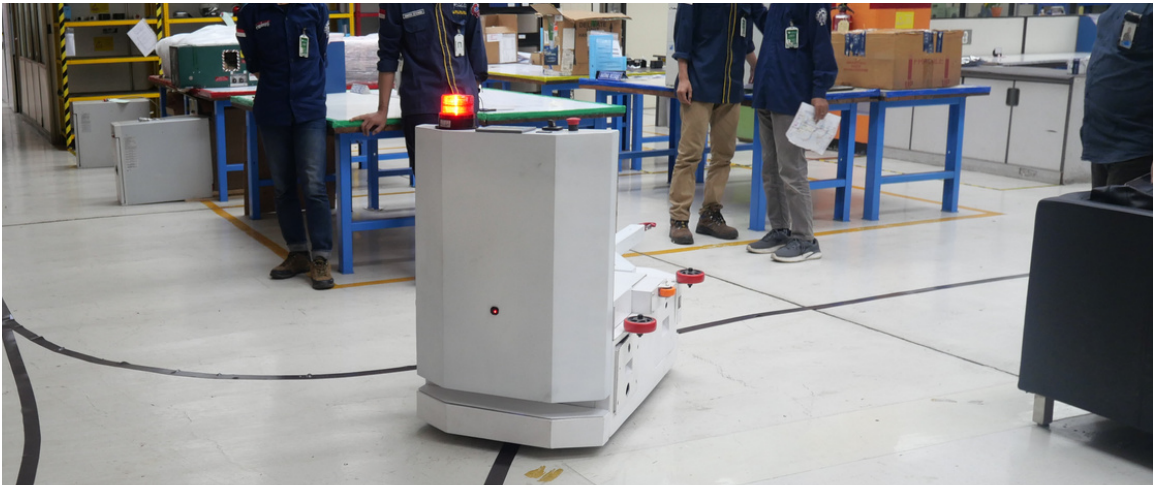
7 **RADIANT (Radiopharmaceutical Automated Dispensing)**

The ¹⁵³Sm-EDTMP Radiopharmaceutical Automated Packaging Machine is designed to package radiopharmaceutical products with high precision while safely managing radiation exposure.

Ready to Use Technology Innovation: Automatic Guided Vehicle

➤ Challenge

PT GMF, a leading aircraft maintenance provider, experienced challenges in efficiently transporting tools and components across its large aircraft hangars. Manual handling by operators led to risks of injury, operator fatigue, slower movement, and frequent damage to sensitive parts, resulting in increased operational costs and reduced productivity.



➤ Solution

UBL developed AGVi, an Automatic Guided Vehicle system designed to transport heavy components autonomously within factory and workshop areas. AGVi replaces manual handling with automated, sensor-based navigation for precise and efficient material transfer. The system can also be adapted for manufacturing, logistics, and assembly industries that demand high operational efficiency.

➤ Results

Improved Efficiency



Automated transport reduced transfer time and manual coordination, ensuring smoother production flow and higher equipment utilization.

Enhanced Workplace Safety



By replacing manual trolleys, AGVi lowered the risk of injuries and physical fatigue while improving operator safety through precise, automated movement.

Cross-Industry Potential

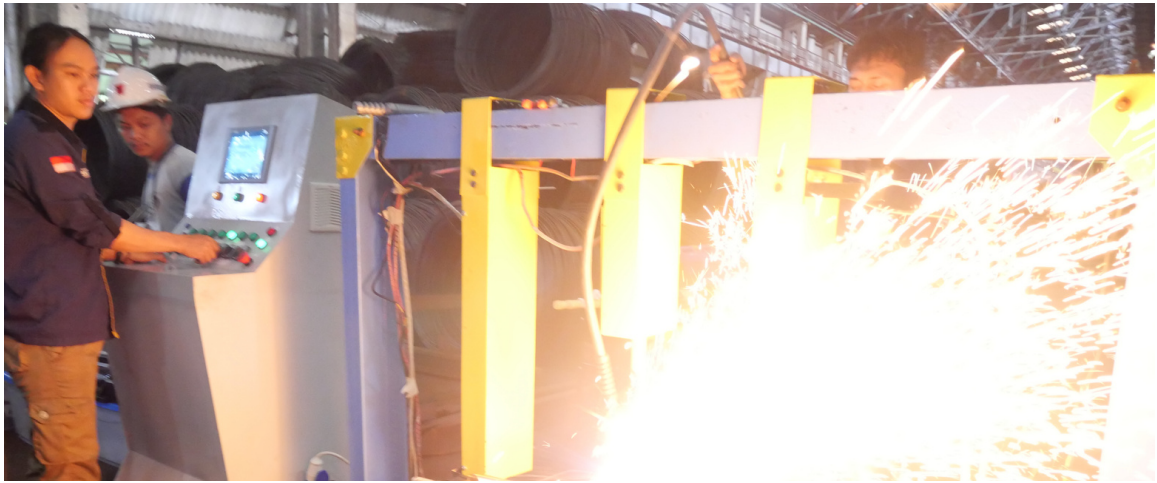


With its scalable design, AGVi can be adapted across manufacturing, logistics, and assembly sectors, offering a reliable solution for efficient and safe material handling.

Ready to Use Technology Innovation: Steel Plasma Cutting

➤ Challenge

One of Indonesia's largest steel manufacturers faced challenges in reducing production costs, particularly in the steel cutting process. The cutting machines required frequent replacement due to wear, and the poor cutting quality led to additional costs for cleaning leftover material.



➤ Solution

UBL developed a precision Steel Plasma Cutting system that delivers cleaner, faster cuts with minimal waste. This innovation reduces machine wear, lowers production costs, and enhances cutting efficiency for Krakatau Steel.

➤ Results

Reduced Production Costs



The precision Plasma Cutting system optimized material usage and minimized blade wear, significantly lowering both maintenance expenses and overall production costs.

Improved Product Quality



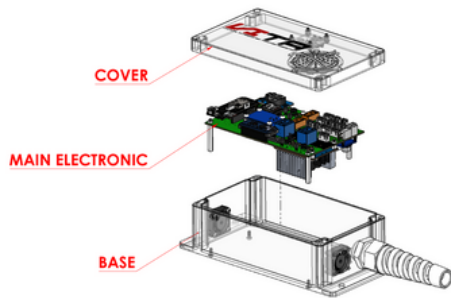
Consistent, high-accuracy cutting delivered cleaner edges and reduced residual material, minimizing post-process cleaning and ensuring higher-grade steel output.

Increased Operational Efficiency



With faster cutting speeds and reduced downtime for maintenance, Krakatau Steel achieved smoother production flow and improved equipment utilization.

Ready to Use Technology Innovation: Fleet Tracking Management System



Overspeed
(>50 km/jam) –
Turunkan Kecepatan



Gear Jangan di Netral
Pas Turunan –
Turunkan Kecepatan



Challenge

Fleet operators in logistics, mining, and public transportation often struggled with monitoring driver behavior, managing safety compliance, and reducing operational risks. Limited visibility led to frequent incidents, inefficient routes, and higher maintenance costs.

Solution

UBL developed VASCE, a smart Fleet Tracking Management System that enhances safety and efficiency through real-time monitoring and driver analytics. It detects unsafe driving, optimizes routes, and reduces operational costs. Designed for logistics, mining, construction, and government fleets, VASCE ensures safer, more efficient fleet management.

Results

Enhanced Safety Performance



Continuous monitoring reduced traffic incidents and improved driver behavior through proactive alerts and performance feedback.

Operational Efficiency Gains



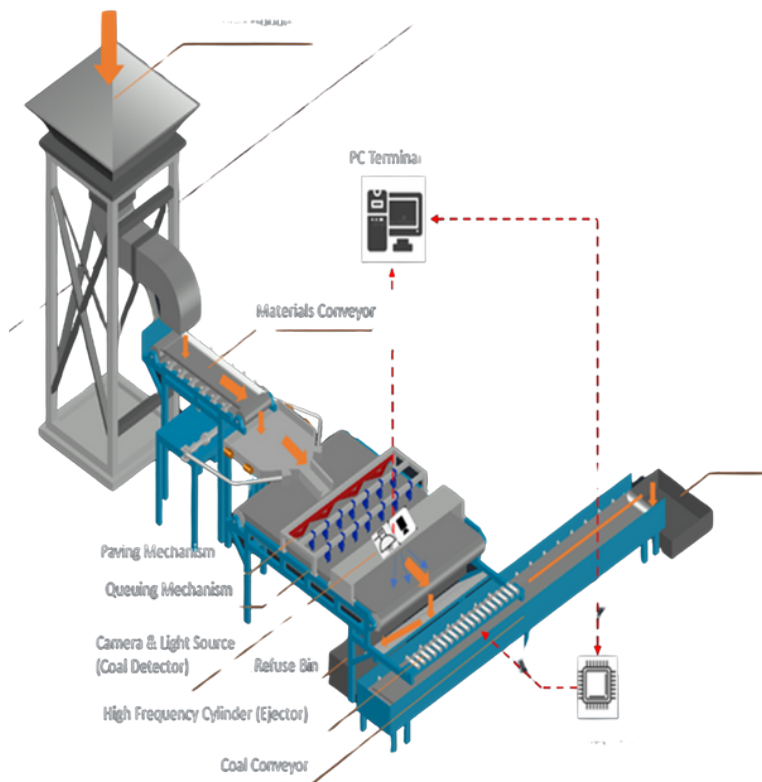
Real-time route and utilization data optimized fleet productivity, fuel usage, and maintenance scheduling.

Cost Reduction & Compliance



By preventing incidents and promoting safer driving culture, VASCE lowered repair costs and improved adherence to safety regulations across all fleet operations.

Ready to Use Technology Innovation: Automated Coal Separation



➤ Challenge

PT Bukit Asam, one of Indonesia's leading coal mining companies, faced difficulties in maintaining consistent coal quality and reducing losses during manual separation. The conventional process relied heavily on human labor, leading to inefficiencies, lower yield accuracy, and increased operational costs.

➤ Solution

UBL engineered CoalSense, an automated coal separation system powered by smart sensors and machine learning algorithms. The system accurately distinguishes coal from impurities in real-time, ensuring high precision, reduced human intervention, and greater consistency in output quality.

➤ Results

Enhanced Yield Accuracy



Real-time detection and automated sorting increased the coal recovery rate while maintaining stable quality across batches.

Reduced Operational Costs



Automation minimized manual labor and processing time, cutting overall production costs significantly.

Improved Environmental Efficiency



Less waste generation and more efficient resource use supported PT Bukit Asam's sustainability and energy efficiency goals.

Ready to Use Technology Innovation: Smart Shaker



➤ Challenge

Laboratories in the agricultural industries faced inefficiencies in the tissue culture cloning process. Manual mixing of media and nutrients often resulted in inconsistent results, longer processing times, and higher risks of human error during culture preparation.

➤ Solution

UBL developed the Smart Shaker, an IoT-based automated shaker designed to optimize the tissue culture cloning process. The system precisely controls vibration speed (RPM) and mixing uniformity, while enabling real-time monitoring of explant growth through a connected digital interface.

➤ Results

Increased Process Efficiency



Automated mixing reduced manual handling, accelerating culture preparation and cloning cycles.

Improved Accuracy & Consistency



Controlled RPM and uniform media blending enhanced cloning success rates and minimized variability.

Cross-Industry Applicability



Beyond agriculture, Smart Shaker can be applied in pharmaceutical and chemical industries to automate mixing processes and minimize operational errors.

Ready to Use Technology Innovation: EUDR Compliance Management System

➤ Challenge

Plantation operators and agribusiness exporters faced growing pressure to comply with international environmental standards, particularly the European Deforestation Regulation (EUDR). Manual monitoring of deforestation, peatlands, and forest areas was time-consuming and prone to data inaccuracy, leading to compliance risks and potential export barriers.



➤ Solution

UBL developed Tanduro, an innovative EUDR Compliance Management System that enables real-time monitoring of plantation areas using GeoJSON-based geospatial data. The platform integrates environmental mapping, deforestation alerts, and sustainability analytics to support transparent and data-driven decision-making.

➤ Results

Enhanced Compliance Readiness



Real-time environmental data helped plantation operators meet EUDR and global sustainability standards efficiently.

Improved Decision-Making



GeoJSON data visualization enabled faster, evidence-based responses to land-use and environmental challenges.

Sustainable Export Advantage



By ensuring full traceability and regulatory alignment, Tanduro strengthened clients' competitiveness in the European market.

Ready to Use Technology Innovation: Radiopharmaceutical Automated Dispensing

➤ Challenge

Radiopharmaceutical packaging processes traditionally involved high safety risks and exposure concerns for operators handling radioactive materials. Manual procedures often lacked precision and consistency, making it difficult to maintain product quality and ensure full compliance with health and radiation safety standards.



➤ Solution

Technovate, in collaboration with BATAN (National Nuclear Energy Agency), developed RADIANT, an Automated Dispensing and Packaging System for ^{153}Sm -EDTMP radiopharmaceuticals. The system integrates advanced shielding mechanisms and automated controls to precisely measure, package, and seal radioactive compounds while minimizing radiation exposure.

➤ Results

Enhanced Operator Safety



Automated shielding and remote handling systems effectively reduced radiation exposure during packaging operations.

Improved Product Precision



Automated dosing and sealing ensured consistent quality and accuracy across all radiopharmaceutical units.

Strengthened Regulatory Compliance



The system met stringent nuclear and health safety standards, supporting safer and more reliable radiopharmaceutical production in Indonesia.

Our Services

Research & Consulting Services

Professional Research & Consulting Services are designed to address organizational challenges across technology, business, and law. UBL provides flexible collaboration schemes—ranging from industry–university joint research to professional consulting services—tailored to meet the specific needs of companies.



Research



Consulting



Industry–University Collaborative Research

UBL's collaborative research model bridges the gap between academia and industry.

Key Offerings:

- Joint development of innovative technologies, prototypes, and systems.
- Feasibility & Impact Studies.
- Pilot Projects & Industrial Trials.



Technology & IT Consulting

Providing tailored solutions to help businesses adopt and integrate technology effectively.



Business & Strategic Consulting

Delivering evidence-based strategic guidance to strengthen business performance, growth strategy, and organizational transformation.



Legal & Regulatory Advisory

Offering expert consultation on legal compliance and regulatory frameworks relevant to any industry-specific standards.

Our Services

UBL Executive Learning

UBL Executive Learning (UBL-EL) was established to address the needs of corporate and organizational partners of Universitas Bandar Lampung who seek to accelerate team competence and performance through professional training programs that are relevant, practical, and directly impactful to workplace results.



UBL Executive Learning offers tailored executive training solutions designed to meet industry-specific and organizational capability needs, including:

- IT & Technology Capabilities
- Banking & Finance
- Construction & Project Management
- Risk Management & Compliance
- Legal & Regulatory Affairs
- Leadership & People Development

Let's design a tailored learning program that fits your organization's needs.

UBL Executive Learning

➤ Leadership & Management

- Transformational Leadership
 - Strategic Thinking for Corporate Leader
 - Communication for Leaders (Public Speaking, Persuasive Communication, Negotiation Skills)
 - Team Leadership: Be an Agile & Effective Leader
-

➤ Managing Finance & Banking

- Credit Risk Management
 - Operational Risk Management
 - Compliance & Good Corporate Governance in Banking
 - Customer Relationship & Service Excellence in Banking
 - Financial Analysis & Decision Making for Non-Finance Managers
 - Fraud Prevention & Internal Control in Banking
 - Sales Pipeline Management
 - Effective Communication & Consultative Selling
-

➤ Legal & Regulatory Affair

- Effective Public Speaking for Legal & Enforcement Professionals
 - Communication Ethics in Legal & Enforcement Settings
 - Corporate Legal Compliance & Risk Mitigation
 - Legal Drafting & Contract Management
 - Anti-Corruption, AML (Anti Money Laundering), and Regulatory Compliance
-

UBL Executive Learning

➤ Construction & Manufacturing

- Heavy Equipment Safety & Maintenance
 - Welding, Manufacturing & Machine Operation Training
 - ISO 45001 & ISO 9001 Implementation
 - Pelatihan Quality Control Pekerjaan Beton
 - Pelatihan Audit Non-Destructive Test pada Bangunan
 - Pelatihan Quality Control Pekerjaan Aspal
 - Pelatihan Soil Investigation
 - Pelatihan Penerapan Sistem Manajemen Laboratorium berbasis ISO/IEC 17025:2017
 - Pelatihan Pengendalian Mutu Kegiatan Laboratorium berbasis ISO/IEC 17025:2017
-

➤ Digital Transformation & Information Technology

- Digital Transformation Strategy for Organizations
 - Data Analytics for Business Decision
 - Cybersecurity Awareness & Risk Management
 - Cloud Computing & IT Infrastructure
 - Artificial Intelligence & Machine Learning for Business
 - Coding Bootcamp (Python, Java, Web Development)
-

➤ Soft Skills in Business

- Critical Thinking & Analytical Thinking
 - Design Thinking for Innovation
 - Time Management & Productivity
 - Negotiation & Conflict Resolution
-

Our Consultants



Our team comprises experts in various fields, including Automation Machinery, Civil Engineering, and Software Development. We bring a wealth of experience and knowledge to every project.

Our Consultants



Riza Muhida, M.Sc., Ph.D

20+ years of experience as a lecturer, researcher, and expert in robotics and machine automation, contributing to innovation and technology advancement in Indonesia



Muh. Riza, Ph.D, ASEAN.Eng

18+ years of experience in automation machinery development as a lecturer, consultant, and industry practitioner, delivering innovative solutions across sectors.



Dr. Marzuki Syahfirin, M.Kom

20+ years of experience as both a researcher and consultant in Information Technology development, with a focus on conservation in Indonesia.



Ahmad Cucus, M.Kom. Ph.D

14+ years as an ICT practitioner and consultant specializing in software development, with extensive experience in designing and implementing digital solutions for various institutions.



Ronny H. Purba, M.Sc.E., Ph.D

15+ years of professional expertise in civil engineering, particularly in earthquake engineering. Active member of the American Society of Civil Engineers (ASCE), the Earthquake Engineering Research Institute (EERI), and the American Institute of Steel Construction (AISC).

And Many More...



Contact Us



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