



## About Us

Since 1983, UMD (Unique Micro Design) has been providing solutions to fit customers' needs for data capture and interface devices and solutions, using fixed and mobile terminals, for a wide range of Edgeware applications within the supply chain. The company's focus is to develop and support Edgeware devices and solutions for Systems Integrators, Value Added Resellers and Industry Partners.

### UMD's technology & service offering encompasses:

- **RFID (Radio Frequency Identification)**
  - o Fixed and Mobile RFID Readers
  - o RFID Tags
  - o LF, HF, UHF, Battery Assisted Tags and Active Tags supported
- **Mobile Computing Devices and Solutions**
  - o Extensive range of rugged and enterprise mobile computers
  - o With GPRS, 3G, WiFi & Bluetooth options
  - o Integrated barcode scanners
  - o Microsoft CE, Mobile or Denso BHT Operating Systems
- **Manufacturing Monitoring Systems**
  - o Real time monitoring of production units
  - o Extensive reports and alarms
- **Warehouse Solutions**
  - o Wireless infrastructure
  - o Wireless hand held and vehicle terminals
  - o Barcode printers and readers
  - o Warehousing Software
- **Barcoding Devices & Solutions**
  - o Extensive range of fixed and hand held barcode scanners
  - o Short, medium, long range and Ultra-long range scanning options
  - o Desktop and Industrial barcode printers
  - o Middleware network and collection software
- **Retail Point Of Sale Terminals**
  - o Computer cash drawers
  - o POS barcode readers (hand held, presentation and in-bench)
  - o POS Keyboards and Touchscreens
  - o POS printers
  - o POS PC Terminals (touch and non-touch)
  - o POS peripherals (scanner/scales/MCR)
- **Payment Gateways and Terminals**
  - o For real time processing of credit cards
  - o Supports IVR, Call Centers, Bill Payment, Batch and Internet payments
  - o Mobile payment solutions
- **Wireless infrastructure**
  - o Site surveys and design
  - o Supply and installation
  - o After sales support
- **Software**
  - o Middleware
  - o Mobility
  - o Asset Management
  - o Software as a Service
- **Professional Services**
  - o Engineering
  - o Electronics hardware design
  - o Software development
  - o Systems design
  - o Installation
  - o Maintenance & support

## Get the "edge", contact UMD today!

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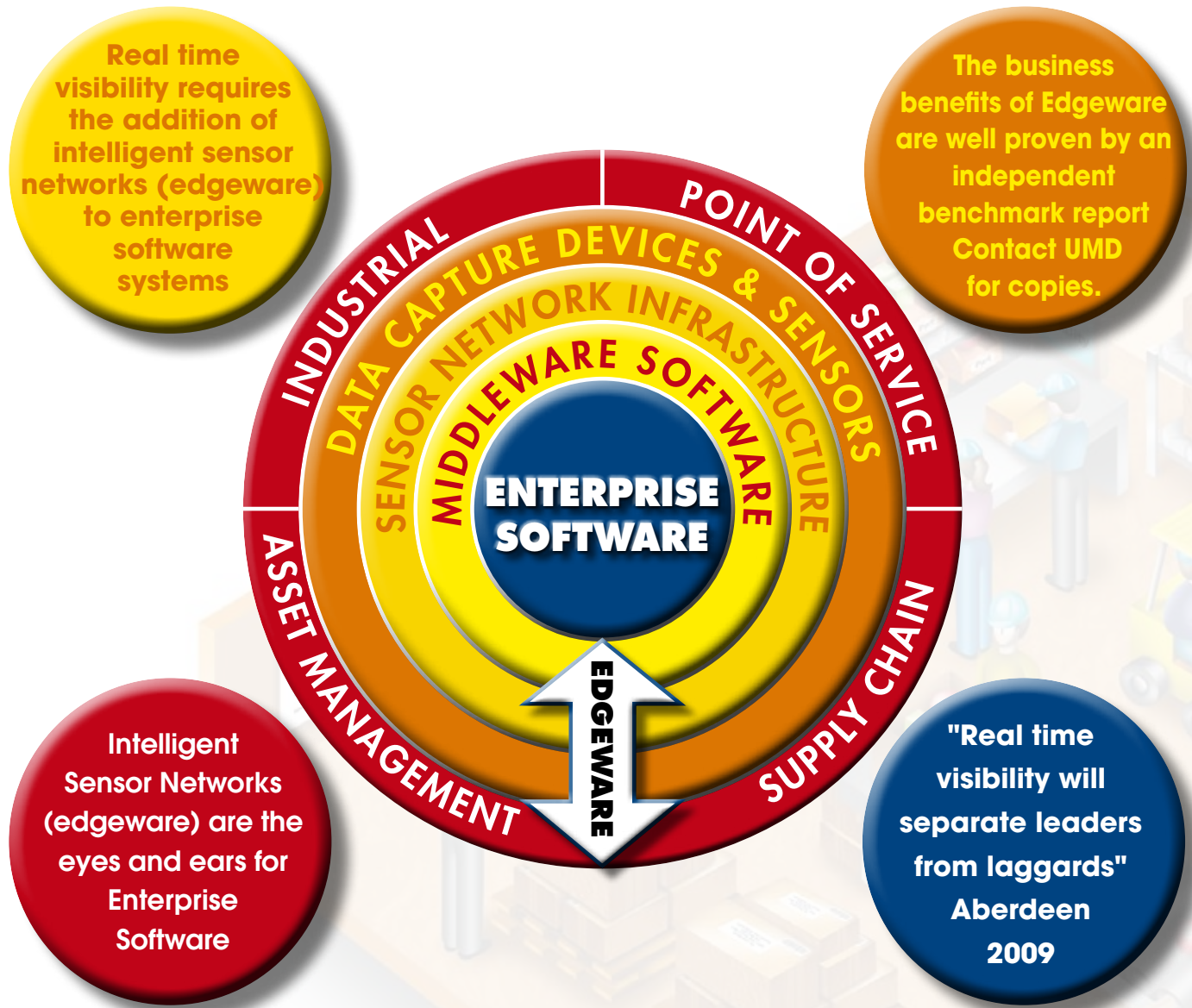
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# Achieve Real Time Visibility with **EDGEWARE SOLUTIONS**

How to Extend  
Enterprise Systems to  
the Point of Activity for  
**ANY INDUSTRY**





**Edgeware** is the next evolutionary step for computer applications in extending the reach of Enterprise Systems (such as ERP/MRP). Edgeware represents the hardware and **Middleware Software** that extends these systems to the physical world at the "edge" of the enterprise where logistical and environmental monitoring and control occur.

**Data Capture Devices and Sensors** typically include Radio Frequency Identification (RFID) readers and tags, barcode readers, temperature sensors, proximity sensors, annunciators and controlling actuators. Enterprise Systems typically do not have the

capability to communicate with data capture devices, nor the intelligence to pre-process their data. In these cases, middleware, as part of an Edgeware solution, will generally be added to provide the necessary interfaces and control to manage devices, collect and process data and collaborate with other systems.

As Edgeware and Enterprise Systems become more sophisticated and integrated the next evolutionary phase of edgeware development will emerge: intelligence. Systems will evolve to sense our movements and demands, anticipate our needs, adjust our supply and communicate our instructions automatically.

A major cost to business operations is in the activity of people in the outer circle covering **Point of Service, Supply Chain, Asset Management and Industrial Applications**. Connecting people and activities in the physical world to your existing Enterprise System gives you real time visibility.

The overwhelming trend in ICT systems today, regardless of industry, is to provide real time visibility of logistical processes and assets. In order to achieve this, "sensors" need to be added to software, to provide it with "eyes" and "ears". A key feature of sensor networks is that they are automated. You do not have to "tell" the enterprise system that you have moved a pallet or asset, the "sensors" can see that you have done this, and can therefore trigger the next process or event automatically.

This results in potential savings in:

- **Efficiency:** by collecting data where it is generated.
- **Effectiveness:** reducing errors and mistakes resulting from poor quality information
- **Empowerment:** of people to do more with access to accurate real time data
- **Ease:** Edgeware reduces the burden on IT resources and bottlenecks.

## UMD Credentials

Due to the growing complexity of "edgeware" and integration issues, specialised skills are required to collect, manage and interface data between terminal devices and the enterprise software application.

Much of this work requires unique knowledge and capabilities relating to business processes, integration, terminal devices, protocols, interfacing, networking, wireless, physics and electronics.

Such skills are represented by UMD's **engineering ICT solutions** capability statement, which UMD defines as its ability to fulfill customer specific needs by:

- **Designing** and modifying electronic terminal products
- **Selecting** and integrating terminals from an extensive range of agency products
- **Supporting** through professional, engineering, software and support services.

## Our Methodology

UMD has developed a five step process for edgeware implementation, which is based on working from the outside of the system's edge (data capture points), to the inside (where enterprise software is interfaced).

We do this by implementing the following steps:

- 1) **Collecting** data from where it is generated
- 2) **Visualising** or displaying this data (independently of the enterprise system) to gain visibility
- 3) **Analysing** this data to see what is going on (eg. identify bottle necks)
- 4) **Automate** this analysis, where possible, by developing optimisation programs.
- 5) **Integrate** this data into the Enterprise System.

A key outcome of this approach is that results can be achieved quickly by implementing the first 3 to 4 stages above, without any integration into the enterprise system. This allows the enterprise software integration to be done independently without interference.

**"ERP Systems can achieve up to 50% higher ROI when used with RFID and mobile data capture devices" Assembly Automation Journal**

**UMD has been in the ICT industry since 1983**

**UMD's five Step process for edgeware implementation gets immediate results**

**ERP Software is only half the story. The addition of complementary Edgeware is how businesses can obtain true value from their Enterprise Software.**

**Contact UMD for a free copy of the RFID Project Guide**