Decision support systems (DSS) are information systems focused on supporting and improving managerial decision-making. Enterprise systems are the transaction processing and reporting systems that support the operations of an organisation.

CDSESR conducts an integrated set of programs in research, research training, graduate education, and professional engagement in the enterprise systems and decision support systems areas. In professional practice this involves personal decision support, executive information systems, ERP systems, inter-organisational systems, data warehousing, customer relationship management, corporate performance management, and business intelligence.

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Foundations of DSS
The aim of this project is to critically investigate the intellectual foundations of the DSS field. The research method involves the content analysis of DSS research papers. The first phase of the project has illuminated both problems and opportunities for DSS research. In addition to the general state of DSS research we have also investigated DSS research funding and the sub-fields of group support systems and data warehousing/business intelligence. Allied with this literature study are investigations into the ethics of DSS and the judgment and decision-making foundations of DSS.

Decision Analysis and Intelligent Decision Support
The aim of this program is to develop and study quantitative modelling and computational intelligence techniques for analysing, evaluating, and improving planning and operational decisions in business, industry, and government. Based on normative and descriptive theories, the techniques used for supporting complex decision-making and improving decision quality include multicriteria analysis, statistical analysis, expert systems, mathematical programming, neural networks, fuzzy logic, and genetic algorithms. To date we have developed decision analysis and intelligent decision support models for a wide variety of practical decision problems in both public and private sectors, using multicriteria analysis, computational intelligence, and optimisation modelling techniques.

Enterprise Systems
This theme focuses on the planning, management, implementation and use of various organisational systems such as enterprise resource systems, mobile systems, and customer relationship systems. We have investigated the use of mobile technology in the health care industry, including aged care facilities, district nursing, and ambulance services. The research methods used are design science, case studies, and action research. To date we have developed theories for mobile systems implementation within organisations.

Development Methodologies
The aim of this program is to develop robust methodologies for the development of personal DSS, business intelligence systems, executive information systems (EIS), and data warehouses. This research uses design science, case studies, and laboratory experiments. The foundation theories for this work are evolutionary development and behavioural decision theory. To date we have developed methodologies for personal DSS, EIS, and corporate performance management that are used in practice.

Data Warehouse/Business Intelligence Governance
Data warehouse (DW) and business intelligence (BI) are large-scale systems with budgets that can rival operational enterprise systems. A major issue in industry is the governance of these systems and applications. This project is using longitudinal case studies to build theory about DW/BI governance. Initial results indicate that the use of operational IT governance may not be appropriate for DW/BI.

For more information visit: www.infotech.monash.edu.au/cdser