



A newsletter from The Da Vinci Institute, an international centre of excellence in the Management of Technology, Innovation and People (MOTIP) and Technology Top 100, for people seeking to improve business performance through a greater understanding of technology management.

tips

MAY 2008

At its Autumn graduation ceremony recently, The Da Vinci Institute awarded four Doctorates in Philosophy in the Management of Technology and Innovation (MOTI), 14 Master of Science degrees, three diplomas and four certificates.

“You have met exacting standards and demonstrated your ability to use newly acquired skills to solve real workplace problems,”

Institute Chairman, Prof Roy Marcus told the graduates.

Thirty-three students also completed short course programmes.



The Da Vinci Institute for Technology Management (Pty) Ltd
Registered with the Department of Education
as a private higher education institution under
the Higher Education Act, 1997.
Registration Certificate No. 2004/HE07/003

What really makes a winner?

For more than 16 years now, The Da Vinci Institute has been running the Technology Top 100 programme to identify the South African enterprises who, through innovation, tenacity and a passionate belief in people, have been able to take themselves to new levels of competitiveness. Here's what makes them winners.

[READ MORE](#)

Missing out on valuable opportunities

Many successful organisations make no use of university or national research laboratories. They are missing out on opportunities to capitalise on tremendous intellectual and research capabilities, says the Minister of Science and Technology.

[READ MORE](#)

Taking innovation across the chasm

Why it's important for innovation to serve the first and second economies and how Da Vinci strives to ensure it does.

[READ MORE](#)

Banks need client centricity to avoid vibration tension

Banks' clear lack of 'client centricity' leads to 'vibration tension', and banks need urgently to learn to handle it if they hope to sustain their profitability.

[READ MORE](#)

Demystifying research models

As researchers and consultants increasingly use models as tools for directing research and managing processes, Dr Hermi Boraine demystifies the concepts.

[READ MORE](#)

The human element is critical to project management

Academics have welcomed, as inevitably will commerce and industry, a new streamlined project management process to meet ever-increasing customer demands.

It's a unique model that takes a systems-thinking approach, giving project managers a new tool that aligns the micro and macro environments inherent in all projects, and it earned Nico de Klerk a PhD in the Management of Technology Innovation and People (MOTIP) from the Da Vinci Institute for Technology Management.

[READ MORE](#)

Tracking women's progress in society

The South African Businesswomen's Association is to develop and maintain an instrument to monitor South African women's progress in society.

[READ MORE](#)



How to be a winning organisation



What makes a winning organisation?

How does an organisation get to be technologically excellent?

For more than 16 years now, The Da Vinci Institute has been running the Technology Top 100 programme to identify the South African enterprises who, through innovation, tenacity and a passionate belief in people, have been able to take themselves to new levels of competitiveness.

They're the companies who have become role models for their development or use of technology.

With time, what drives them to technological excellence has emerged clearly.

A winning organisation, whether public or private and whatever its business, is led and managed by people who have three considerations uppermost in their minds.

The first is a focus on managing technology.

They appreciate the impact that technology will have on the future of their operations.

They move in a new decision-making paradigm where they ask the right questions, make informed decisions and recognise the impact the decisions will have on the operation.

They keep the organisation well informed on technological changes, staying constantly vigilant and well informed about competitors.

They realise that research and development are critical, and that their future is vested in their ability to develop and protect their intellectual property.





The second consideration is the organisation's ability to manage innovation.

In winning companies, leaders and managers create an environment conducive to constant interrogation and re-examination of the way they do business.

They deliberately generate inherent restlessness and take the innovation process way beyond generating new ideas to minimising skills while maximising opportunities.

They integrate innovation into the research and development process and set up 'stage gates' that tell them when it is advisable to cut expenditure or take a new course of action.

The third consideration is the human-technology interface.

Winning leaders and managers are able to re-position the organisation in changing circumstances.

They know there's no such thing as bad technology, just technology that fails because the people who developed it ignored the human element.

Winning organisations work innovatively, imbue their people with a sense of ownership and re-educate their customers.

In winning organisations, these three determinants are inextricably linked to the notion that the organisation is a system.

Managing this fourth dimension is critical.

To manage their operations as a system,

winning organisations understand their core competencies and position themselves uniquely in the market.

They appreciate the internal forces on the system, give significant attention to external factors and constantly test the impact of their actions on the system.

More than that, winning organisations understand the connections between these determinants and know they're fundamental to sustainable high performance.

They align technology and people, ensuring that all the elements of operations are in place to meet the business's strategic objectives.

They link innovation and people through engagement, ensuring that they win total buy-in from all employees, and attach paramount importance to the notions of connectedness, contribution and credibility.

Finally, they show an agility to link technology and innovation, to ensure that the organisation has the tools to answer the challenges of growing competition and to foster rapid prototyping, productivity and being first to market.

In winning companies, leaders and managers create an environment conducive to constant interrogation and re-examination of the way they do business.



MISSING OUT on valuable opportunities

The Minister of Science and Technology, Mosibudi Mangena, gave the keynote address at the Technology Top 100 Awards recently.

Innovation, he said, was fundamental to economic growth and the improvement of the quality of life of South Africans.

“The real question, however, is whether we have been successful in making the drive to innovation a fundamental component of the national psyche.

“At the moment, it appears that knowledge and ideas that are generated in the domain of research laboratories and academic institutions still have a long way to go before they are fully integrated in industry as innovative goods and services.

“There are important lessons we can draw from the story of the TT100 winners and qualifiers. Their achievements tell the story of our country’s potential for success,” he said.

Here, slightly abbreviated, is the rest of his speech.

The Technology Top 100 Awards provide significant information about what government needs to do to support our researchers and companies in their endeavours and to enable them to achieve even greater success.

A matter of grave concern though, which emerged from the TT100 adjudication process, is that most of the qualifying organisations interviewed make no use of our university or national research laboratories.

It means they are missing out on valuable opportunities to capitalise on the tremendous intellectual and research capabilities of these institutions.

One of my department’s key challenges is to create a greater awareness of the benefits to be derived from partnerships between these institutions and the TT100 companies.

The challenge should be approached from two angles.

Firstly, if state-funded institutions are to fulfil their mandate, they need more actively to seek partnerships with private

and public sector organisations. Secondly, it is our responsibility to make the TT100 winners and qualifiers more aware of the advantages of partnering our institutions of research and higher learning.

And, as we form partnerships, we must increase our efforts to move the innovation process out of the research institutes and universities into the organisations that play a pivotal role in the economic growth of South Africa.

Government has identified a need to modernise and grow our economy through science and technology.

As a result, my ministry is processing legislation through Parliament to establish the Technology Innovation Agency (TIA), hopefully by the beginning of the next financial year. The function of the agency would be to support researchers and innovators to develop their ideas into prototypes, and to finance and assist them through the initial intricate processes of commercialising their products and services.





To harness the intellectual capital produced in higher education institutions and research laboratories, we are planning to introduce the Intellectual Property Rights from Publicly Financed Research Bill to parliament during this year.

Among other things, the envisaged IP Bill will enable my department to establish an Intellectual Property Management Office to support inventors and innovators to manage their IP.

These instruments will encourage the private sector to use the intellectual capacity at our universities and research laboratories to produce even more innovative products and services.

I urge companies, big and small, to try to emulate the TT100 companies' successes in their own organisations.

The TT100 companies set a positive example for South African companies to begin a process of developing a brand of innovation that is unique to our rapidly developing country with its challenges and possibilities.

The winners are organisations that have moved beyond the rhetoric of innovation and progressed to a clear understanding of the application of knowledge and ideas, and the empowerment of their staff to recognise opportunities and run with them.

The TT100 awards acknowledge the calibre of our people and the skills of our

science and technology managers and leaders. Digging a little deeper into some of the stories behind the TT100 programme, we find organisations that stand out from their local and international competitors in many ways.

One quality in all of them is a constantly questioning mindset. This attests to the reality that South Africans have a talent for asking the right questions in their environment.

Another is their ability to create an environment conducive to innovation and a sense of ownership among their employees. Anecdotal evidence abounds about the inventive ways that companies inculcate an innovative mindset in their organisations.

It is heartening to realise we are now using the quantitative data from the TT100 adjudication process to produce some useful information on trends. This is the beginning of an important process from which we can all benefit.

I understand that four master classes, which will be offering useful opportunities to build on the networking initiated tonight, will be held during the course of this year. These classes will also give insights to the inner workings of some of the winning companies.

We need to ensure that the lessons learned from the adjudication process are passed on to the widest audience possible.

2007 MINISTER'S AWARD FOR OVERALL EXCELLENCE Altech Netstar (Pty) Ltd

AWARD FOR EXCELLENCE	ESTABLISHED ENTERPRISES	EMERGING ENTERPRISES
<i>Management of Research</i>	DebTech	
<i>Management of Technology</i>	Altech Netstar (Pty) Ltd	Water Angel Operations (Pty) I-Slices Innovations (Pty) Ltd
<i>Management of Innovation</i>	Advanced Technologies & Engineering Company (Pty) Ltd	Hot Platinum (Pty) Ltd
<i>Management of People</i>	Accsys (Pty) Ltd	
<i>Management of Systems</i>	PFK Electronics (Pty) Ltd	Altis Biologics (Pty) Ltd
<i>Management of Technology, Innovation and People</i>	Allied Technologies Ltd (Altech)	

Innovation for the first and second economies

An institution for higher education - indeed any educational institution - is systemically linked to various government policies and structures.

Da Vinci's registration with the Department of Education and its compliance to the relevant act and statutory conditions are cases in point.

What is often not considered is an institution's responsiveness to policies of other ministries.

It's crucial for the higher education sector to align with the science, technology and innovation policies, strategies and instruments that reside with the Minister of Science and Technology.

Many of South Africa's current science, technology and innovation strategies aim directly or indirectly at extracting economic benefits from public spending on research and development (R&D).

The benefits are often expressed as a ratio between R&D expenditure upstream and innovation downstream.

But empirics show that the innovation return from R&D investment is not what it should be.

It's the (first) innovation chasm.

For an optimum return on investment, the country must use its research findings in technology, innovations and programmes, etc.

Da Vinci and the first economy

Research projects must give more attention to taking findings forward systematically.

Of course, there are implications: the dynamics of the implementation process, possible methodological and other limitations on research, differences and overlaps between the research and innovation processes, and ideological, ethical and economic considerations (to list a few).

All of them, and more, impact on the application of research findings.

But The Da Vinci Institute is explicit in identifying or classifying where it, and its postgraduate degrees, expect students' research to lead: research must add value to the professional context in which it was undertaken.

MSc and PhD degrees are professional degrees. Dissertations are based on research in the workplace and aimed at 'substantial organisational or professional change and ... a significant contribution to practice'.

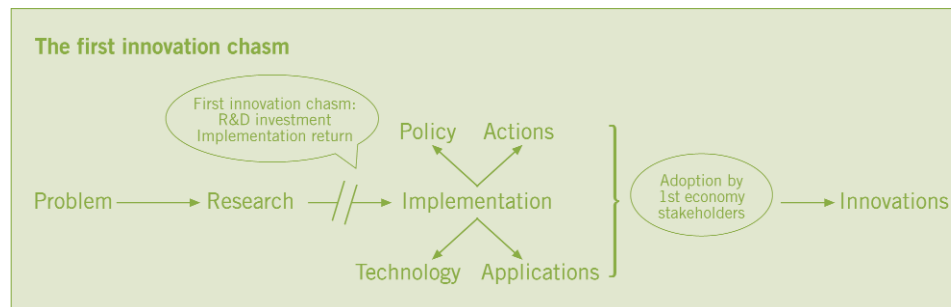
Da Vinci sets clear requirements for any dissertation: it should focus on 'real-world challenges'; it should offer 'real solutions' that feed directly into the



student's professional environment, and 'path-finding' approaches to business and socio-economic problems.

Provision of a field or industrial supervisor, in addition to the academic supervisor, facilitates implementation of the research findings and recommendations.

These and related approaches address the national challenge of bridging the first innovation chasm.





Research relevance

In its commitment to making post-graduate research responsive to user needs, whether at the level of professions, organisations, sectors, government or communities, Da Vinci is addressing several priorities.

Firstly - and obviously - professional dissertations must comply with universal scientific criteria, such as accounting for the existing knowledge in a particular field, reliability, validity and replicability.

Secondly, experience shows that implementing research findings - and applied and professional research - is not automatic. Research commissioned by the National Advisory Council on Innovation showed that the rate of successful economic and technical implementation of research findings was low.

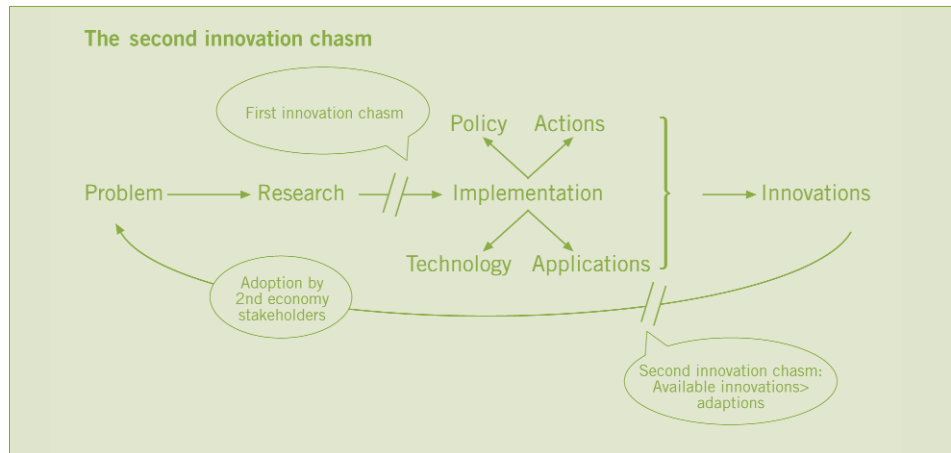
Thirdly, Da Vinci is looking at extending its influence beyond the borders of South Africa. Virtually all the projects by students over the past year would benefit countries to the north, if they accounted for national contexts.

Clearly, Da Vinci has addressed its role in bridging the innovation chasm in the first economy.

Da Vinci and the second economy

What about the second economy?

This question poses a fourth priority for research in Da Vinci's context: spreading technology and innovation to, and making them work for the benefit of, the second economy.



Research must address challenges such as reducing poverty, improving primary health care, eradicating sub-tropical diseases, improving agriculture, accelerating rural economies, increasing productivity of investment in development, impacting significantly on literacy and numeracy, eliminating the digital divide, optimising the introduction and management of technology in SMMEs and promoting entrepreneurship in rural areas

Responding positively to this challenge would address the second innovation chasm and Da Vinci has taken initiatives to steer dissertation projects in this direction.

It's often said that a second innovation chasm disrupts the transfer of available technology and innovation to developing - second economy - communities.

Most observers would agree that technology and innovation are available

to address most of the above generic challenges characterising the second economy.

Yet our country is, deep into the first decade of the 21st century, apparently not close to impacting significantly on these generic second economy characteristics.

The relationship between the two innovation chasms is graphically illustrated above.

Challenges and responses

An analysis of national imperatives that the next South African government is expected to promote, suggests it will rate transformation of the second economy as a higher priority than does the current government.

It is normal that such imperatives permeate most, if not all, sectors of government, including higher education and science, technology and innovation. Institutions involved in science, technology and innovation, such as Da Vinci, would be wise to note this.

Including the challenges of transforming the second economy in its focus areas requires Da Vinci to attend to corollary challenges, such as:

- the dynamics of technology and innovation transfer;
- the nature of indigenous knowledge and technology systems;
- intellectual property rights in a developing country; and
- research methodological requirements unique to development contexts.

Da Vinci is committed to professionally relevant dissertation research by promoting an understanding of the dynamics of economic, technical and related implementation of research findings; to expanding its operations to other African countries, as other research institutions have done; and through its postgraduate portfolio, to contributing to transforming the second economy, which means that dissertation themes should address the second economy.

Readers are invited to comment on this article. Feedback to bok@davinci.ac.za would be useful input to the process of refining the Da Vinci research strategy.

Banks need client centricity to beat vibration tension



South African banks might be stunned to know that recent PhD research shows eight in a hundred people simply hate visiting them.

Thirteen in a hundred feel banks are greedy or stealing their money, and 22 find banks frustrating.

Banks' clear lack of 'client centricity', says PhD graduate, Etienne Slabbert, ultimately leads to 'vibration tension', that ill-at-ease, out-of-my-comfort-zone feeling.

And banks need urgently to learn to handle it if they hope to sustain their profitability.

Slabbert bases his views on research done for a PhD in the Management of Technology and Innovation (MOTI) through The Da Vinci Institute for Technology Management.

He explains: "Global competition - in some cases hyper competition - in more and more markets is prompting businesses to focus more on their clients and managing relationships with them.

"New forms of competition and structural changes, due partly to the so-called emerging economy, add pressure on organisations to ensure they expand their

client base and market share.

"The trend is forcing organisations to re-assess their client interactions to find the keys to unlock the value of a client-centric philosophy and to implement it."

Slabbert analysed the current reality in retail banking and developed a management framework to help organisations address client centricity.

In doing so, he uncovered 'vibration tension', built a framework to help contemporary retail banking to manage it and offered recommendations for improving client centricity.

Slabbert says it's clear from the research that human dynamics play an important role in clients' perceptions of the level of client centricity in organisations.

A 2006 report from the Ombudsman for Banking Services showed the main causes for clients' complaints to be maladministration (26%), unfair treatment (24%) and fraud (22%).

They were also the three major causes for complaints during 2005.

Of the 12 top causes for complaints noted in the 2006 report, at least eight - maladministration, unfair treatment,

negligence, misrepresentation, transaction error, fees and charges, breach of contract and confidentiality - could be defined as avoidable.

These eight represent 73% of all complaints in 2006.

Slabbert himself uncovered additional sources of 'vibration tension' during the research: wasting time, long queues, bad attitudes of bank staff, high banking fees, slow services, incompetent staff, insufficient ATMs, not enough staff at peak times, and low interest rates for deposits.

"Had the retail banks been able to eliminate these avoidable 'vibration tensions', the level of client satisfaction and perceived client service would have increased dramatically and client loyalty would have improved accordingly."

Client centricity comes from client service, client satisfaction and client loyalty.

In any organisation, it indicates the level at which the organisation is willing or able to centre its operations and strategies from a client's - an external - viewpoint.

"The organisation cannot be client centric if all its products, processes, operations





and strategies are internally focused,” he says. “Yet the dominant retail banking business model in South Africa seems to be one that focuses on product leadership and not on customer intimacy.

“Most banks have structured themselves into silos that don’t service the client as a whole.

“I doubt this strategy will be sustainable in the long term. In a world becoming increasingly impersonal, clients yearn to return to a personal, community-based banking experience.

“Banks must find ways to address these issues to improve their clients’ perceptions of service and their own level of client centricity. “

The client landscape in South Africa has changed significantly since the start of the new democracy in 1994, he adds, and the new middle class will play a significant role in the growth of the South African economy during the next few years.

Training and business change-management are critical for any organisation transforming into a client centric organisation, Slabbert says.

It is also important that training is done at the frontline to embed the guiding principles into the organisation.

He also suggests replacing a hierarchical team structure with self-directed teams.

“A team of empowered staff is much more powerful than a team of disconnected

individuals and the recommendation is to empower these teams to do most of what the management hierarchy undertook in the past.

“Large volumes of transactions, high numbers of clients and regulatory demands make it impossible to run a large retail bank without the effective use of technology.

“But it is just as crucial to use technology, where appropriate, to improve client centricity in retail banking.

“Retail banks must continually evaluate their processes and identify those that can be automated to ensure that they can scale up to greater volumes and ensure accuracy of updates.”

Slabbert also recommends that banks provide a single perspective on a client and avoid treating a client as new every time there is an interaction.

“One of the problems facing retail banks is that they use many legacy front-end systems, when interacting with their clients. These front-end systems in many instances do not integrate with each other or with the back-end product systems and as a result client records are difficult to maintain,” he says.

“In many instances a simple activity such as a mailing address change needs to be performed on three or more front-end systems, opening up possibilities for errors and mistakes.”

Just as regular and preventative maintenance of cars or machines helps them operate at optimum levels without breaking down, Slabbert stresses, regular client ‘maintenance’ softens vibration tension and gives early detection of vibration tension.

What banks need to do

Slabbert’s guiding principles for banks’ interaction with clients:

- Understand that the client, not the boss, is the source of one’s salary.
- A positive attitude among staff supports perceptions of good service.
- Understand that the client’s value is equal to approximately 20 times his or her annual sales value.
- The quality of the service and the relationship are more important than the value of the product or service.
- Client satisfaction is worthless: it is loyalty that counts. Satisfied clients will buy from anyone, but loyal clients will come back.
- The client gives feedback when the sale is over by saying something or nothing. Both give an indication of how they perceived the interaction.
- Word-of-mouth advertising is fifty times more effective than traditional advertisements.
- Friendliness and eagerness to assist are in a direct ratio to one’s success.
- An organisation’s policy is written for the organisation, not for the client. It should say what can be done for the client not what cannot be done.
- Start any client interaction with a “Yes!”. It will lead to remarkable results.
- Service is perceived by the client not the organisation.



Using - and misusing - models in research and innovation

Researchers and consultants are increasingly using models as tools to direct research, map and manage processes, or to structure advice.

Many dissertations approved for Da Vinci's Autumn graduation developed, or extensively used, existing models in research projects.

It's the same in applied technology and innovation management research literature, if the titles of journal articles are anything to go by.

At a recent *Curiosita*, Dr Hermi Boraine, acting executive director of the National Advisory Council on Innovation (NACI) spoke on *Modelling in research and innovation: Opportunities and pitfalls*.

She sought to demystify the concepts of models and model building, and to generate guidelines for the accountable use of models in research.

Alongside is a summary of her view.

It is important to realise that a model is a relatively simplified representation of a more complex object, situation or event.

It is developed to facilitate the understanding, prediction and/or manipulation of a more complex reality.

Models are not reality but tools to assist the researcher, innovator or trainer.

How should the advanced student, committed innovator or manager evaluate a model?

Criteria are many:

- **Usefulness** - the extent to which the model serves the purpose for which it was developed.
- **Scope** - the range of phenomena to which the model can be applied. This requires careful consideration, since a balance has to be struck between the enticement of all-inclusiveness that covers many dimensions in general and hardly anything in particular, and over-cautiousness of restricting the coverage to a too-narrow spectrum.

- **Precision** - the degree to which the consequences of a model can be derived unequivocally from the inference rules implicitly or explicitly provided by the model. This is especially important in cases where the model is used as a predictive tool.
- **Simplicity** - a representation, by definition, must be less complex than the phenomenon it tries to represent.

An explicit supporting framework should be provided in the presentation of any serious model.

Such a framework should include, among other information, supporting documents and literature, an explication of assumptions, original data on which the model was based, information on tests of the validity of the model, and directions for maintaining the model during its life cycle.

Of course, models also pose potential problems for their users and developers:

- **Model proselytising** - promoting one model at the expense of others that might fit the facts equally well, if not better.

- **Selective representivity** - since models are essentially simplifications of reality, the inherent danger is that the model might omit essential dimensions of the phenomenon being modelled.

- **The 'all else being equal' assumption** - the developer and/or user ignores subtle or even gross differences between conditions in which the model could or could not be applied.

- **Unrealistic assumptions** - often leading to a model representing a 'reality out there' which does not exist.

It is important to ask oneself whether one's perception of that reality is attainable at all.

Dr Boraine stresses the utility of models in research and innovation and encourages researchers and innovators to use models as a relatively economic thinking-tool that could open new perspectives in endeavours to understand and manage the world better.

But she cautions that modelling as such should not be equated with the mere use of PowerPoint software.

If they are to be useful, models have to comply with testable criteria.

The human element is critical to project management

Academics have welcomed, as inevitably will commerce and industry, a new streamlined project management process to meet ever-increasing customer demands.

It's a unique model that takes a systems-thinking approach, giving project managers a new tool that aligns the micro and macro environments inherent in all projects, and it earned Nico de Klerk a PhD in the Management of Technology Innovation and People (MOTIP) from the Da Vinci Institute for Technology Management.

The model enables business to manage and measure projects more effectively by giving special focus to a new management style and a synergy between team members to achieve the project's goal.



Perhaps more than ever before, effective project management is critical to South Africa's well being.

Ongoing development - both generally and specifically to build the Gautrain system and World Cup soccer stadia - stresses its importance.

Indeed, project management has become a dominant tool for managing organisations, large or small, effectively.

Yet, even though there's no lack of project management processes, and large international professional bodies have documented sophisticated menus for them, many projects still run into difficulty.

So it's no surprise that academics have welcomed, as inevitably will commerce and industry, a new streamlined project management process to meet ever-increasing customer demands.

The unique model takes a systems-thinking approach, giving project managers a new tool that aligns the micro and macro environments inherent in all projects.

It enables business to manage and measure projects more effectively by giving special focus to a new management style and a synergy between team members to achieve the project's goal.

De Klerk's research passed the scrutiny of 20 senior project managers whose consensus was that its outcomes will have far reaching implications for project management as business currently

understands it.

That assessment was unanimously confirmed by his examination committee.

The work is comprehensive and detailed, and its complexities warrant closer examination and explanation than space here permits, but it spotlights critical focus areas to ensure that projects will always be executed most efficiently.

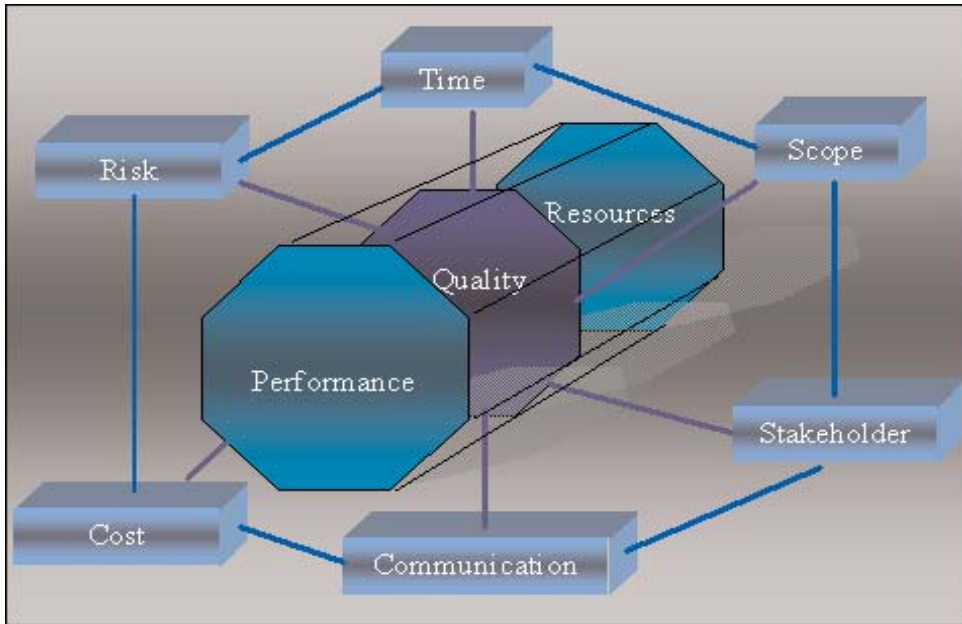
Importantly, it offers critical guidelines for project managers' use of human resources.

"Project management processes," De Klerk confirms, "affect every sphere of business, directly or indirectly. Without understanding of project management principles and implications, a lot of work is unnecessary, work pressures build up and focus is lost."

In business today, he says, effective management of any project depends on the theoretical model it uses. But existing models measure a project's effectiveness focusing only on time, scope and cost.

"If a project is to deliver the quality that customers expect from it," he argues, "managers must use a formal process to manage and measure quality."

De Klerk's study reveals more effective ways to manage and measure processes and resources, especially human resources, to ensure that projects deliver as planned; to help managers focus on critical areas; to 'conduct' the project effectively and efficiently; to recognise macro and micro environmental impacts; to set the milestones at which project



performance can be measured; and to pinpoint the management controls that will ensure the project continues effectively and efficiently.

From his studies came the development of a '3D consolidated project management model' that integrated the project knowledge, centralised quality, and recognised resources as input and project performance as the outcome.

Resources, De Klerk says, cover base intelligence, information and data necessary for decision-making and knowledge formation; intellectual resources like ability, knowledge, techniques and skills; and financial resources that help to procure other resources.

"I found it especially important that the project leader, the individuals and the

team had the ability to perform successfully, and that the project leader showed ability to match the right person to the right role, job or function, ensuring that the right tasks are performed at the right time."

But he went still further.

Progressive refinements led to an 'alignment and change model': an 'open system' with inputs to the organisation and individuals from the external environment, and an output giving feedback to the external environment.

The model also embodies change processes to help project leaders manage and measure their projects more effectively.

"It is a logical model. It integrates all the human elements required for successful delivery. And though the processes are integrated particularly within the human

performance arena, they can be used selectively on the other project areas.

"Measurement and mitigation of specific areas becomes easier to understand and to communicate. It clearly indicates the relation between all the elements within a project. It provides the opportunity to measure the core elements of what makes projects successful. It also provides an opportunity to design interventions long before they become crisis management.

"What's more, the model guides project managers in a management style that will create synergy between team members through a flow of information (positive and negative) back and forth between all the role-players."

The refined model equips project kingpins to take account of more issues than they often realise they should, and it ensures they do so.

De Klerk's model is set up to persuade any project leader that it is essential to align a shared vision of the project to the strategy of the organisation.

He or she must share the vision with the team and make it applicable to the project's purpose.

Obviously, the leader, team and team members must have the competence to perform the duties spelled out in the project requirements, but the skills needed to be competent inevitably stand or fall on individuals' personal attributes.

"The personal attitude (willingness and

confidence) of the individuals generates team dynamics, which, with the leader's attributes, have an impact on how a team culture is formed.

"The leader determines an engagement culture that needs to align to the strategy and organisational values. The individual and team must fit into this culture to succeed," he stresses.

Specific attributes determine the leadership style needed to lead the team, create the right team structure, and manage the team dynamics effectively in a system supporting the entire project.

"Project managers often succeed or fail depending on their ability to manage conflicting stakeholder interests and expectations.

"Building and leading the project team, navigating organisational politics and knowing how to gain, sustain and even inspire commitment to the project purpose, are all extremely important.

"The project manager must gain and sustain commitment to the project purpose. Commitment is the energy that propels the project forward. Without it, the project is stagnant."



Tracking women's progress in society

The Da Vinci Institute for Technology Management is preparing to begin a long-term project to monitor and analyse women's progress in leadership.

This much needed - and exciting - research is the result of a request to Da Vinci by the South African Businesswomen's Association.

A memorandum of understanding is expected to be signed shortly between Da Vinci and the Regional Gender Programme of Africa Bureau of the United Nations Development Programme for the funding of the project.

(The UNDP Gender Programme is located in Addis Ababa, Ethiopia.)

Women's position in society is a salient issue on the agenda of most developed countries, the Association believes, and the position of women in countries (still) in the process of radical transformation, such as South Africa, is even more acute.

It's especially important in Africa in general and South Africa in particular for reasons such as the constitutional imperative against all forms of discrimination, historical legacies of discrimination, staggering human capital challenges, rapid economic growth and international

agendas on dealing with women.

It is clear that although progress has been made over the past decade or more, there is still a long way to real equity.

Statistics in publications such as the census on South African women in corporate leadership and the National Advisory Council on Innovation's (NACI) women's participation in science, engineering and technology, confirm this.

Da Vinci's project proposal provides for a system for annually monitoring and analysing the leadership position of women in corporate business, science and technology, higher education and government.

Apart from South Africa, it is planned initially to include Nigeria, Kenya, Namibia and Mozambique in the study.

The project will be overseen by a steering committee of key interest groups, including the UNDP, SA Businesswomen's Association and Da Vinci.

It is planned to launch the project in May with a short overview of the position of women in selected African countries.