DUT

DURBAN UNIVERSITY OF TECHNOLOGY

INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

ENVISION 2030

Siyaphumelela Conference 2024

25-28 June 2024

The Wanderers Club, Johannesburg

The Sandwich Axiom of Holistic Success:

pre-in-post university success

Thandwa Mthembu
Durban University of Technology

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

OUTLINE

❑ **Introduction**

❑ **ATD2024: Vision and Hope**

❑ **The Sandwich Axiom of Holistic Success**

❑ **Theories of Student Success: Tinto's Theory of Institutional Departure**

❑ **Towards a Psycho-socio-economic Theory of Success**

❑ **DUT's ENVISION2030 and The Sandwich Axiom**

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

ATD2024
Vision and Hope

ATD2024

Vision and Hope Statements

❑ *"We have <u>shifted our work from</u> looking at designing specific and often <u>siloed interventions</u> to recognizing the <u>processes,</u> <u>structures,</u> and <u>attitudes</u> that need <u>reinvention to drive whole-college transformation</u>."*

❑ *"We <u>shifted from</u> looking at <u>completion as the key success metric</u> to looking at <u>what that completion leads to</u> - <u>social and economic mobility</u> that is <u>an engine of community vibrancy</u>. As we transform, our communities transform."*

Talia Christian, a 2022 DREAM Scholar, quoted in ***Activating our Vision and Hope,*** a Keynote Address at ATD2024 by *Dr Karen Stout*, ATD CEO.

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

ATD2024

Vision and Hope Statements

❑ *"That work is wide ranging — from creating holistic student support systems to promoting cultures of teaching and learning excellence, and from broadening how we use data to drive equitable decision-making on campus to building boundary-spanning partnerships that connect us more deeply with our communities." Talia Christian, 2022 DREAM Scholar*

❑ *"We have an education system that provides inequitable access, support, and opportunity, resulting in less student success for marginalized students, perpetuating a gendered and racialized wealth gap." Dr Karen Stout, ATD CEO.*

❑ *"…racially minoritized students are disproportionately enrolling in programs with lower earnings and that "colleges that enroll proportionally more underrepresented minority students tend to offer fewer programs in fields that lead to the highest post-college earnings." Dr Karen Stout, ATD CEO.*

❑ *"Marshall said that it is the right of all students, "whatever their race, to an equal start in life and to an equal opportunity to reach their full potential as citizens."" Dr Karen Stout, ATD CEO.*

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT

DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

Analysis of ATD2024 Vision and Hope Statements

| Field of success	Vision and Hope Statements
Pre-university	…inequitable success, support and opportunity…
	…whatever their race, to an equal start in life and to an equal opportunity to reach their full potential as citizens
In-university	…often siloed interventions … to processes, structures and attitudes that need reinvention to drive whole-college transformation
	…creating holistic student support systems to promoting cultures of teaching and learning excellence…how we use data to drive equitable decision-making
	…inequitable success, support and opportunity…fewer programmes in fields that lead to the highest post-college earnings
	…enrolling in programmes with lower earnings
Post-university	…from completion as the key success metric to … what that completion leads to – social and economic mobility that is an engine of community vibrancy…
	…to building boundary-spanning partnerships that … connecting us more deeply with our communities
	…perpetuating a gendered and racialized wealth gap

2

The Sandwich Axiom of Holistic Success

Pre-in-post university success functions (lines)

Post-university

L

(Point of Success)

In-University

Pre-university

$h(x)$

$g(x)$

$f(x)$

a

time
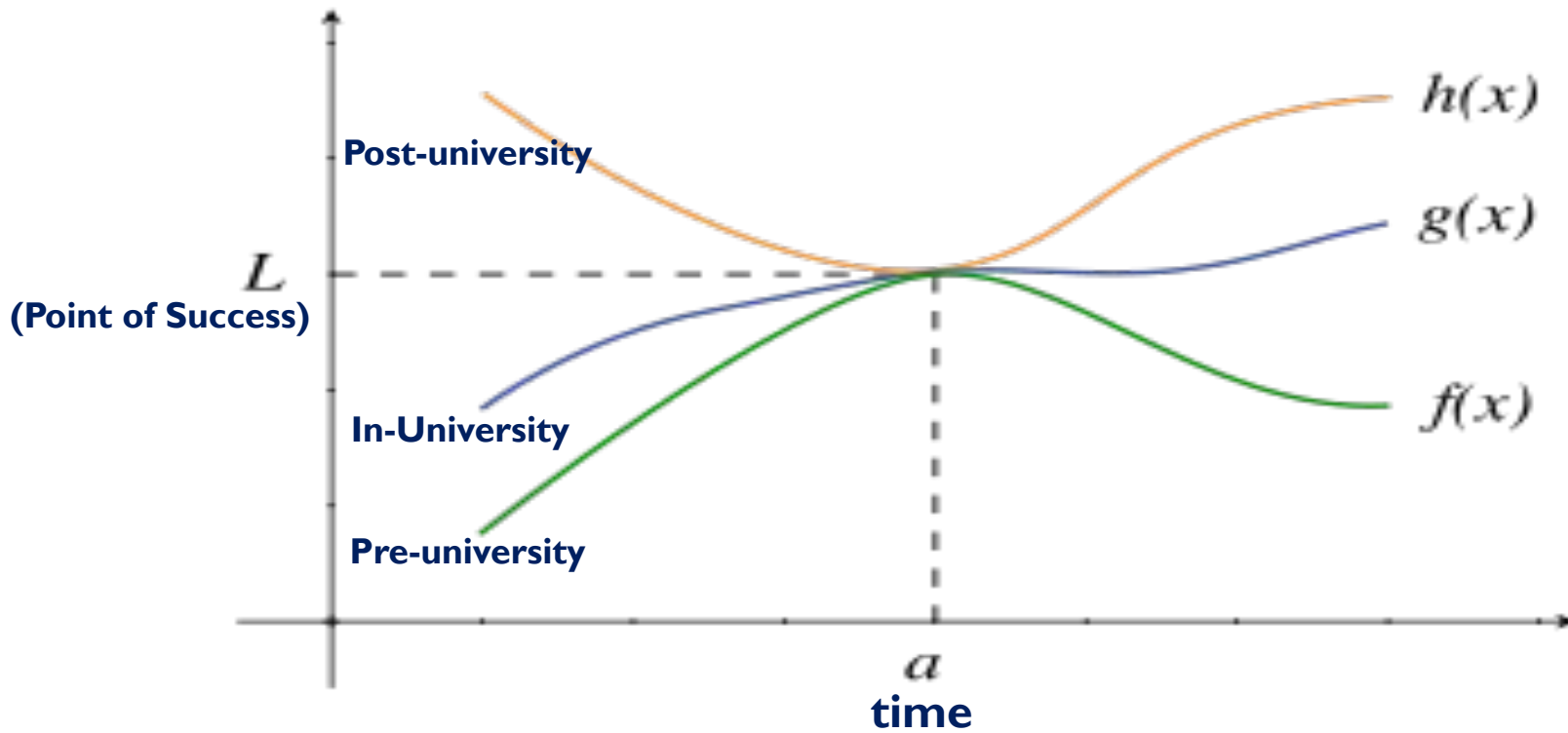
The Sandwich Theorem and The Sandwich Axion

The Sandwich Theorem: *If two functions f(x) and h(x), where x is a variable point, approach the same limit say L, when x approaches a certain point, and there is a third function, g(x), such that f(x) ≤ g(x) ≤ h(x) for all x in some interval containing the point, then g(x) also approaches L as x approaches that point.*

The Sandwich Axiom of Holistic Success: *If <u>pre-university education</u> and <u>post-university lives and livelihoods</u> approach a point of success, then <u>in-university student success</u>, which must be sandwiched between pre- and post-university success, will also approach that point of success.*

Theories of Student Success

vs

ADT2024's Vision and Hope

Theories of Student Success

Tinto's Theory

To persist, students need integration into:

- ❑ Academic performance
- ❑ Academic systems
- ❑ Social systems

What other authors say about Tinto's Theory

- ❑ "…one of <u>the first conceptual studies on school evasion</u> was carried out by *Vincent Tinto (1975),* who presents a theoretical model of behavioral evasion based on the theory of suicide by sociologist *Émile Durkheim* (2000). According to <u>Durkheim's theory</u>, suicide is more likely to occur when <u>people are not socially integrated.</u>"

- ❑ "Vincent Tinto (1975, 1993) considers <u>the educational institution as a social system</u>, when comparing the dropout of higher education to suicide that occurs in societies. The author tells us that the theory of suicide, applied to school evasion, was first used by Spady in 1970 and based on this initial study, he proposes not only a behavioral description of dropout phenomenon, but also ways of predicting when this phenomenon occurs, as well as <u>the lack of interaction with people from the institution</u> and <u>insufficient adequacy to the prevailing values in the university institution.</u>"

- ❑ "In summary, we can point out that <u>the student integration model</u> takes into account <u>the academic dimension</u> and <u>social integration.</u>"

Pinheiro C, Robeiro J & Fernandes S (2023). Theoretical models of dropout in higher education and notes on the national context. Avaliacao: Revista de Avaliacao da Educacao Superior. Campinas. Sao Paolo.

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

Vision and Hope versus Tinto's Theory

Field of success	Vision and Hope Statements	Tinto's Theory
Pre-university	…inequitable success, support and opportunity… …whatever their race, to an equal start in life and to an equal opportunity to reach their full potential as citizens	While Tinto's Theory is essentially a psycho-social one and properly identifies social systemic issues, it does not emphasise resolving these issues at source – at school!
In-university	…often siloed interventions … to processes, structures and attitudes that need reinvention to drive whole-college transformation …creating holistic student support systems to promoting cultures of teaching and learning excellence…how we use data to drive equitable decision-making …inequitable success, support and opportunity…fewer programmes in fields that lead to the highest post-college earnings …enrolling in programmes with lower earnings	▪ Academic performance ▪ Academic systems ▪ Social systems (within the university)
Post-university	…from completion as the key success metric to … what that completion leads to – social and economic mobility that is an engine of community vibrancy… …to building boundary-spanning partnerships that … connecting us more deeply with our communities	Vision and Hope statements suggest not only psycho-social challenges, but socio-economic challenges Tinto's Theory seems to assume will be resolved through in-university student success!

Reflections: ATD2024's Vision and Hope

Critical Questions

- How far has this <u>vision</u> been realised through **Siyaphumelela 1.0 and 2.0**?

- What <u>hope</u> is there in Siyaphumelela 3.0 that the <u>vision</u> will realise?

- What <u>divergent</u> or <u>disruptive thinking</u> is emerging or will emerge from Siyaphumelea2024 this week charting the way towards the <u>vision</u> and <u>hope</u>?

- Is there full <u>capacity</u> in the current <u>theories of student success</u> to take us on the trajectory of the <u>vision</u> and <u>hope</u>?

- Are there <u>case studies</u> of universities in our **Siyaphumelela** network on this trajectory of the <u>vision</u> and <u>hope</u>?

Siyaphumelela2024 Presentations?

- *Pre-university education* interventions or projects to for better-prepared and -oriented students

- *In-university education* interventions and projects in 'innovative curricula and research' and towards *'creating a compelling and a future-oriented environment for learning and living'*

- *Post-university lives and livelihoods,* based on how we will have provided a learning environment that helps to produce graduates with *'the acumen to initiate, influence and/or respond to changes in the world'*

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

Towards a Psycho-socio-economic Theory of Success

❑ **Challenges of student success are not only <u>endogenous</u> and <u>psycho-social</u> (Tinto); they are <u>exogenous</u> and <u>socio-economic</u>, too.**

❑ **With Tinto's Theory (1975,1993) as a bedrock, a further <u>Integration Theory</u> is required so that exogenous and socio-economic challenges students and graduates face could be part of the equation.**

❑ **<u>The Sandwich Axiom of Holistic Success</u> is one possibility, for which a <u>Psycho-socio-economic Framework</u> is being developed.**

❑ **Siyaphumelela 3.0 must align accordingly!**

ENVISION 2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

DUT's ENVISION2030
and
The Sandwich Axiom

ENVISION2030

fairness • professionalism • commitment • compassion • excellence
transparency • honesty • integrity • respect • accountability

DUT

DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

ENVISION 2030

STATEMENT OF INTENT

Our people will be creative, innovative, entrepreneurial and adaptive to changes in the world;
By 2030 Our people will participate productively in the development of our region, country and the world;
Our state-of-the-art infrastructure and systems will enhance an ecosystem created to achieve this vision.

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

...and thus contribute to Improving Lives and Livelihoods

INFLUENCING AND IMPACTING
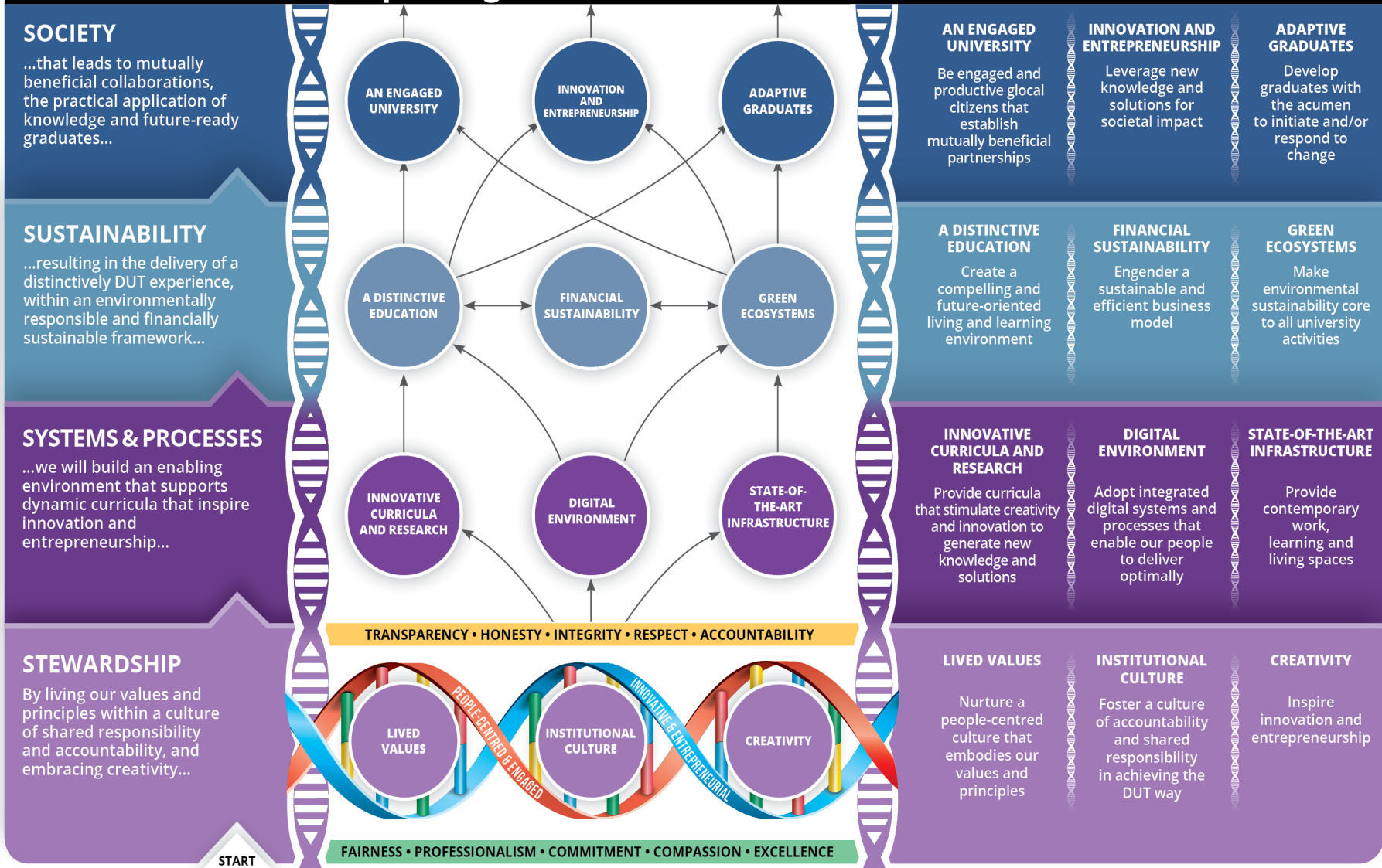
SOCIETY
...that leads to mutually beneficial collaborations, the practical application of knowledge and future-ready graduates...

SUSTAINABILITY
...resulting in the delivery of a distinctively DUT experience, within an environmentally responsible and financially sustainable framework...

EFFECTING AND ENABLING

SYSTEMS & PROCESSES
...we will build an enabling environment that supports dynamic curricula that inspire innovation and entrepreneurship...

STEWARDSHIP
By living our values and principles within a culture of shared responsibility and accountability, and embracing creativity...

START

AN ENGAGED UNIVERSITY

INNOVATION AND ENTREPRENEURSHIP

ADAPTIVE GRADUATES

A DISTINCTIVE EDUCATION

FINANCIAL SUSTAINABILITY

GREEN ECOSYSTEMS

INNOVATIVE CURRICULA AND RESEARCH

DIGITAL ENVIRONMENT

STATE-OF-THE-ART INFRASTRUCTURE

TRANSPARENCY • HONESTY • INTEGRITY • RESPECT • ACCOUNTABILITY

PEOPLE-CENTRED & ENGAGED

INNOVATIVE & ENTREPRENEURIAL

LIVED VALUES

INSTITUTIONAL CULTURE

CREATIVITY

FAIRNESS • PROFESSIONALISM • COMMITMENT • COMPASSION • EXCELLENCE

AN ENGAGED UNIVERSITY
Be engaged and productive glocal citizens that establish mutually beneficial partnerships

INNOVATION AND ENTREPRENEURSHIP
Leverage new knowledge and solutions for societal impact

ADAPTIVE GRADUATES
Develop graduates with the acumen to initiate and/or respond to change

A DISTINCTIVE EDUCATION
Create a compelling and future-oriented living and learning environment

FINANCIAL SUSTAINABILITY
Engender a sustainable and efficient business model

GREEN ECOSYSTEMS
Make environmental sustainability core to all university activities

INNOVATIVE CURRICULA AND RESEARCH
Provide curricula that stimulate creativity and innovation to generate new knowledge and solutions

DIGITAL ENVIRONMENT
Adopt integrated digital systems and processes that enable our people to deliver optimally

STATE-OF-THE-ART INFRASTRUCTURE
Provide contemporary work, learning and living spaces

LIVED VALUES
Nurture a people-centred culture that embodies our values and principles

INSTITUTIONAL CULTURE
Foster a culture of accountability and shared responsibility in achieving the DUT way
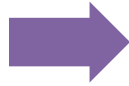
CREATIVITY
Inspire innovation and entrepreneurship

Creative. Distinctive. Impactful.

ENVISION2030 and the Sandwich Axiom

Field of success	Perspective/Strategic Objective	Actions/Responses (Examples)
Pre-university	**Stewardship** Lived values (e.g. integrity, excellence) **Society** An engaged university, through its people	▪ *How prevalent are these in our students at pre-university level so it could be easier to facilitate social integration within an academic environment?* ▪ *Projects designed for feeder schools (e.g. in STEM)*
In-university	**All 4 Perspectives** Creativity Innovative curricula and research Distinctive education Adaptive graduates	▪ **Constructivist** approaches like PBL, Design Thinking ▪ DUT's new Philosophy of Education: ▪ Our <u>creativity and innovation</u> shapes <u>adaptive graduates</u> who <u>transform society</u>
Post-university	**Stewardship** **Sustainability** **Society**	▪ **Adaptive Graduates** through ▪ Innovation and entrepreneurship so graduates could 'transform societies and their economies' and 'contribute towards the lives and livelihoods of the broader society'

ENVISION2030
(Mantra & Tagline)

Different → **U**pended → **T**ransformed

- Creative

- Distinctive

- Impactful

DUT DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

ENVISION2030

transparency • honesty • integrity • respect • accountability
fairness • professionalism • commitment • compassion • excellence

CREATIVE. DISTINCTIVE. IMPACTFUL.

THANK YOU