

# Using Science and Practice to create Meaningful Behavioural Competency Measures at The Warehouse

**the warehouse** //  
*where everyone gets a bargain*



**Massey University**

Jane Davis – Head of Talent Management, The Warehouse  
Duncan Jackson, PhD – Massey University, Albany



Duncan Jackson sings 'Dry Science'

Side 1

45 STEREO

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\*Engineer: Michael Frondelli

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# The Popularity of Competencies

- “almost every organisation with more than 300 people uses some form of competency-based human resource management.” – Boyatzis (2008, p. 5)

# The Popularity of Competencies

- Used in a variety of modes, including job analysis and as a paradigm for job performance ratings (Bartram, 2005; Lievens, Sanchez, & de Corte, 2004)

# Criticisms

- Despite their popularity, empirical research has lagged behind practice
- This has created a divide between the scientist and the practitioner
  - See (Barrett & Depinet, 1991; Lievens, et al., 2004; Markus, Cooper-Thomas, & Allpress, 2005; McKenna, 2004; Ruth, 2006)

# The Current Situation

- Despite their overwhelming popularity, “many if not most systems based on competencies lack legal defensibility.” – Catano, Darr, and Campbell (2007).

# What Can Be Done???

- There is evidently a problem here that extends to New Zealand (see Markus, et al., 2005)
  - Is there a solution?

# The Warehouse: Project 'Sensible Competency'

- My task was to help develop a set of competencies that held a robust basis for The Warehouse
- My ultimate goal was to establish a set of competencies that showed basic psychometric evidence

The Warehouse employs around 8,500 people!



# The Warehouse Competencies

- Up until this time The Warehouse:
  - Used items derived from inductive job analyses assessed in the Sonar6 interface
  - These items had been placed into competency categories on *theoretical* grounds (not empirical grounds)
  - The competency approach here was used for developmental purposes

# (a) Competency Scale Development

- Start with exploratory, data-driven techniques, then move to confirmatory approaches
  - Exploratory factor analysis and item analysis
  - Confirmatory factor analysis (CFA)

## (b) Relations with Hard Outcomes

- I then related 'soft' competency measures to 'hard' work outcomes
- Assisted in terms of
  - Gaining evidence for the validity of the competency scales
  - Helping The Warehouse to decide how certain competencies should be weighted over others

...if you don't like stats, please  
apply your stats-blinkers now

# Results – Team Members

- Admissible 7-competency solution
  - (non-negative unique variances, standardised estimates < |1|, see Marsh, 1994)
- Within the bounds of acceptability across a range of CFA goodness-of-fit indices
  - ( $\chi^2 = 770.778$ ,  $df = 539$ ; squared root mean residual = .053; root mean squared error of approximation = .044; Tucker-Lewis index = .931; comparative fit index = .937)
- All intrarater reliability estimates > .70

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## Team Members – Competency Definitions

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#	Competency	Definition
1	Service Action	At an operational level, works towards managing customer relations in an efficient and effective manner.
2	Promotability	Is motivated to take on more responsibility and move upwards through the ranks of the organisation.
3	Team Focus	Demonstrates a strong capacity to work effectively with other members of the work team.
4	Commitment	Is demonstrably proud of working for the organisation and supports its core purpose.
5	Personal Leadership	Is aware of his or her own strengths and weaknesses and works well under challenging circumstances.
6	Driving Business Performance	Understands the business and operational goals and works hard in her or her role to assist in achieving these goals.
7	Focus on Results	Reliably delivers expected results in a timely manner and maintains attention to detail.

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# Relationships with 'Hard' Criteria

## Canonical Solution for Team Members

		Function 1			Function 2			
		Coef	$r_s$	$r_s^2$ (%)	Coef	$r_s$	$r_s^2$ (%)	$h^2$ (%)
Competency Criteria	Service Action	-.26	<b>-.71</b>	50.41	.27	.07	0.49	<b>50.90</b>
	Promotability	-.11	-.27	7.29	.94	<b>.70</b>	49.00	<b>56.29</b>
	Team Focus	.42	-.39	15.21	.35	.21	4.41	19.62
	Commitment	-.23	<b>-.57</b>	32.49	-.44	-.08	0.64	33.13
	Personal Leadership	.07	<b>-.54</b>	29.16	-.61	-.29	8.41	37.57
	Driving Business Performance	-.26	<b>-.66</b>	43.56	-.32	-.10	1.00	44.56
	Focus on Results	-.78	<b>-.88</b>	77.44	.22	.02	0.04	<b>77.48</b>
$R_c^2$			25.88			11.68		
Other Criteria	Overall Job Performance	-.88	<b>-.93</b>	86.49	.49	.36	12.96	<b>99.45</b>
	Tenure	-.24	-.23	5.29	-.55	-.41	16.81	22.10
	Pay-Level	.31	.40	16.00	.84	<b>.70</b>	49.00	<b>65.00</b>

Note. Structure coefficients ( $r_s$ ) > |.45| and communality estimates ( $h^2$ ) > 45% appear in bold (see Sherry & Henson, 2005). *Coef* = standardized canonical function coefficient;  $r_s^2$  = squared structure coefficient;  $R_c^2$  = squared canonical correlation.  $N$  (Team Members) = 118.



Jane Davis sings 'Relevant Practice'

Side 2

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# A Scientific Approach to Competency Development at The Warehouse



**the warehouse** //  
start here. go anywhere.

# Background

- Our competency journey
- Why do this piece of work?
- Our approach
- Gaining buy-in
- Where to now?



# Our competency management journey

- Original model in place for several years
- Link to performance management
- Split from performance management
- Introduction of Sonar6 for competency assessment



**Three years down the track...**



# Validating the Competency Model

**How do we know  
we are measuring  
the right things?**



**AND DOES ANYONE CARE?**



# Our approach

- **Small technical team from HR**
- **Development of new model**
- **Future proofing the model**



# Getting buy-in to the new Competency Model

- Who needs to know?
- How do you convince people this stuff is important?



# Where to now?

- Use in recruitment
- Update competency management questions for 2010
- Increasing people's awareness and understanding about the importance of this work



**IT'S WORTH THE EFFORT!!**

