E-Learning in Industry: A New Zealand perspective

Dr John Clayton

Emerging Technologies Centre
Te Taiwhanga Hangarau Mohou
Wintec
Waikato Institute of Technology
Te Kuratini o Waikato

E-Learning

The provision, administration and support for ‘off-the-job’ and ‘on-the-job’ training, using information and communication technologies such as stand-alone and networked computers, Internet-based technologies and mobile devices.

Table 1: *Recent Internet use by individuals for education: August 2006*

Age Group	Recent Internet users [5]	% of total population[6]	Education or study
15 - 19	264,400	87.2	55.1
20 - 24	237,700	83.8	39.4
25 - 29	212,000	82.4	23.3
30 - 34	225,700	82.8	20.8
35 - 39	232,800	77.0	22.1
40 - 44	242,800	77.8	21.3
45 - 49	220,100	73.3	21.9
50 - 54	179,300	68.9	19.4
55 - 59	152,000	63.8	15.9
60 +	240,600	35.8	14.0
Total	**2,207,600**	**69.0**	**26.3**

[Source: Statistics New Zealand. (2007a) (p83)]

Business use of computers and the Internet: 2006			
Business Size	Total	% Using computers	% Using the Internet
6-19 employees	25,974	92	89
20-49 employees	6,288	97	95
50-99 employees	1,731	99	98
100+ employees	1,440	100	99

Statistics New Zealand. (2007). *Business Operations Survey: 2006*

Table 3: *Business use of computers and the Internet: By type: August 2006*

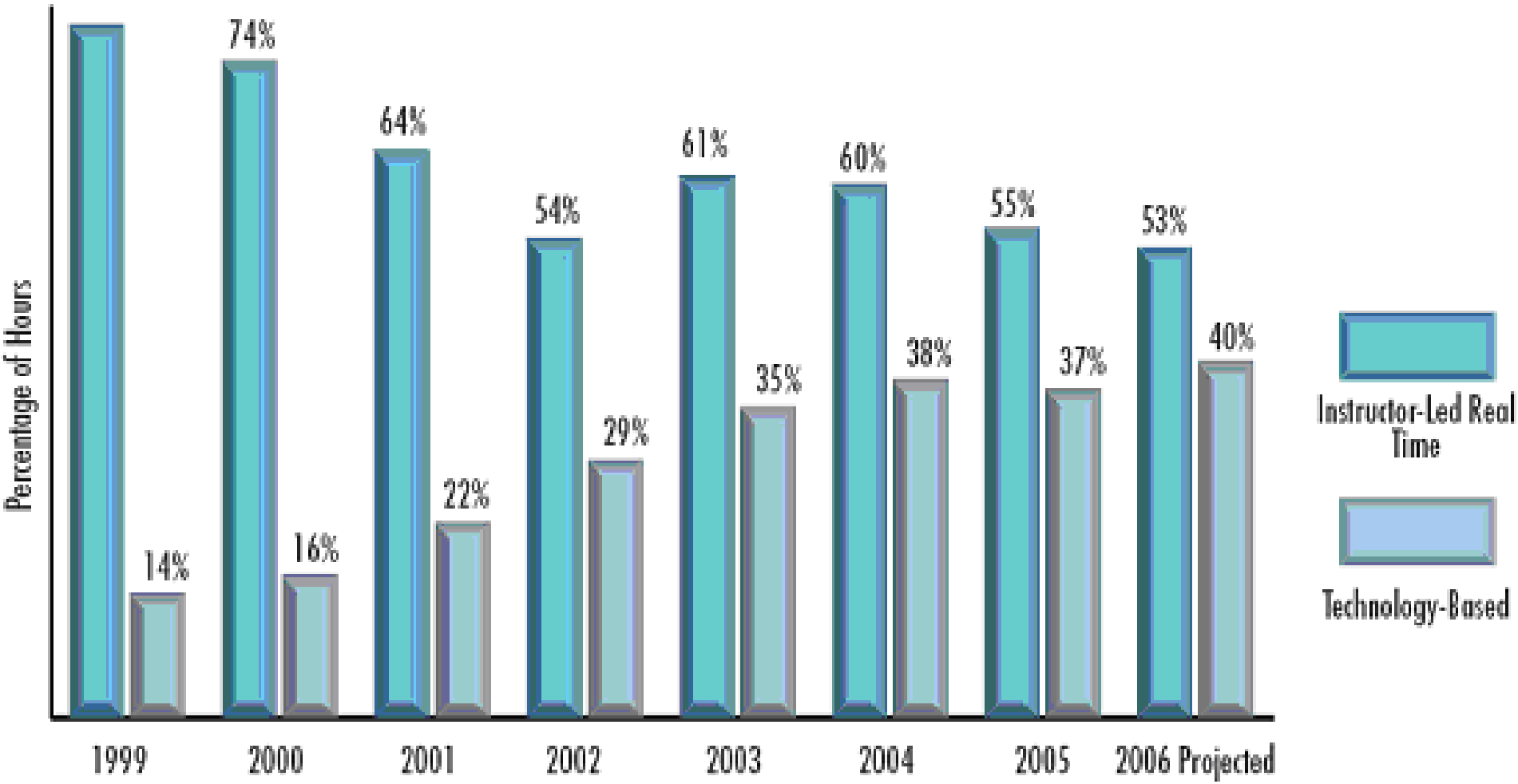
Industry	Businesses	% Using computers	% Using the Internet
Agriculture, forestry and fishing	3,123	82	77
Mining and quarrying	90	83	77
Accommodation, cafes and restaurants	3,465	78	82
Retail trade	5,886	93	89
Construction	3,549	98	92
Manufacturing	5,523	97	93
Health and community services	2,085	99	93
Transport and storage	1,524	98	94
Communication services	141	96	94
Cultural and recreational services	615	95	95
Education	585	98	96
Property and business services	5,055	98	96
Wholesale trade	3,198	99	97
Finance and insurance	582	99	99
Electricity, gas and water supply	18	100	100
Total	**35,436**	**93**	**91**

[Source: Statistics New Zealand. (2007a) (p98)]

Table 5: *Provision of training via the Internet by type: August 2006*		
Industry	Number using the Internet	% of staff training via the Internet
Agriculture, forestry and fishing	2,403	7
Construction	3,267	8
Accommodation, cafes and restaurants	2,835	9
Manufacturing	5,157	12
Retail trade	5,259	16
Restaurants	1,428	20
Wholesale trade	3,099	21
Health and community services	582	21
Property and business services	549	24
Mining and quarrying	69	27
Education	1,935	30
Transport and storage	132	32
Finance and insurance	4,845	33
Communication services	579	34
Electricity, gas and water supply	18	50
Total	**32,157**	**22.9**

[Source: Statistics New Zealand. (2007a) (p102)]

[Original Source: Rivera, R. & Paradise, A. (2006) Figure 15, p14]



Actual e-Learning growth (n=37)

[Original Source: Rivera, R. & Paradise, A. (2006) Figure 15, p14]

The e-learning Promise

e-learning applications are seen to be critical in providing

- the right skills training,
- to the right person,
- at the right time,
- in the right place.

Some Examples

Kevin Sullivan's Autoshop101

Automotive training and resource site for automotive electronics

Heinz

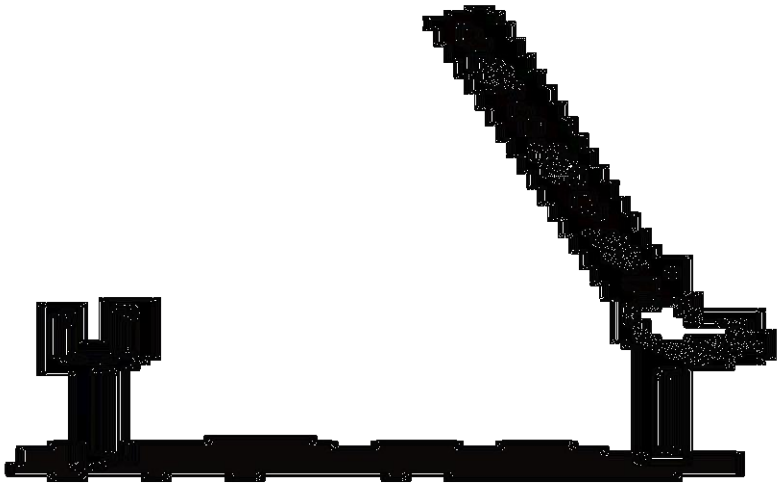
Training for production operators in the food manufacturing industry

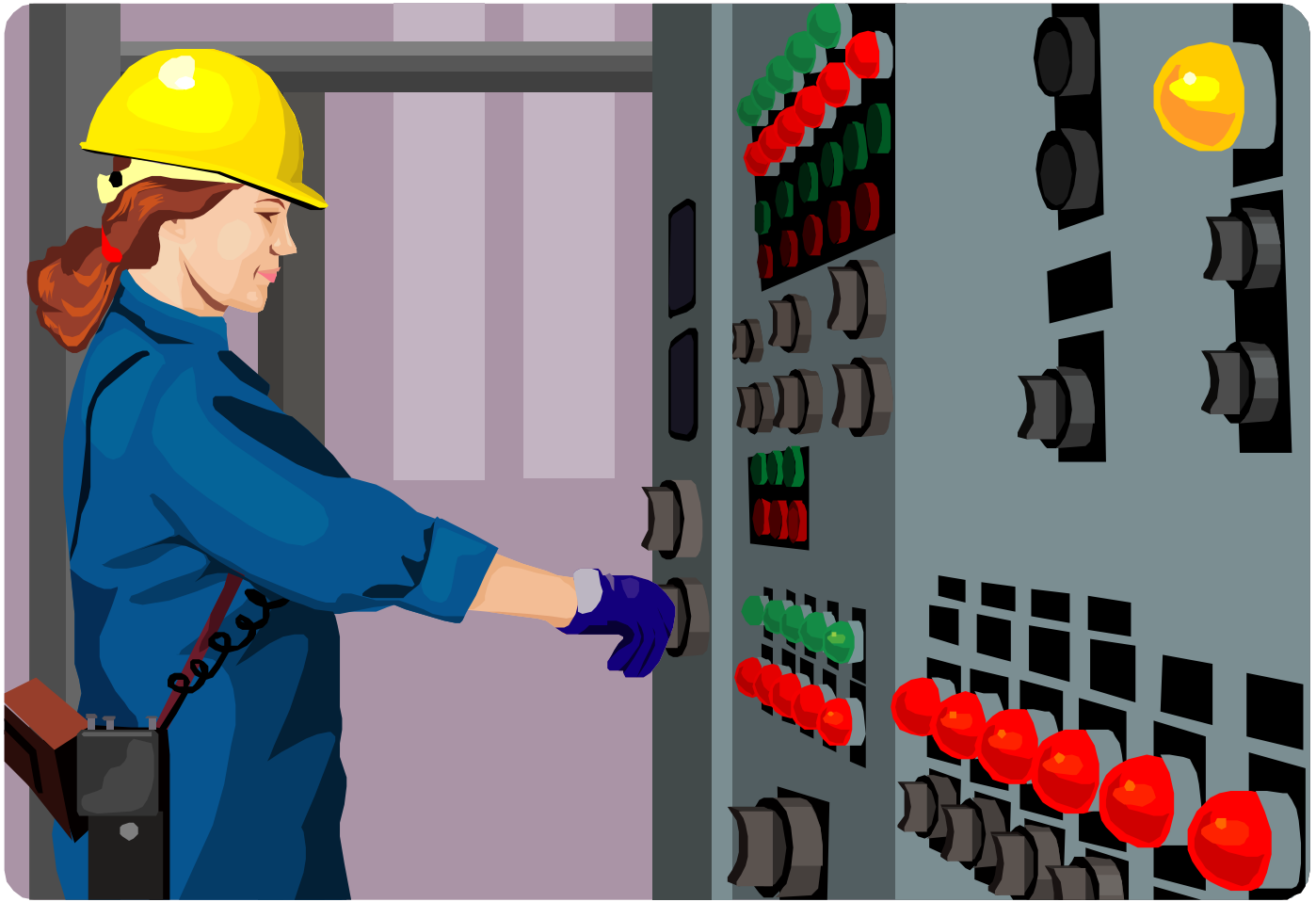
Growing the Business of Farming | NSW Farmers Association

Training for commercial pesticide users in NSW

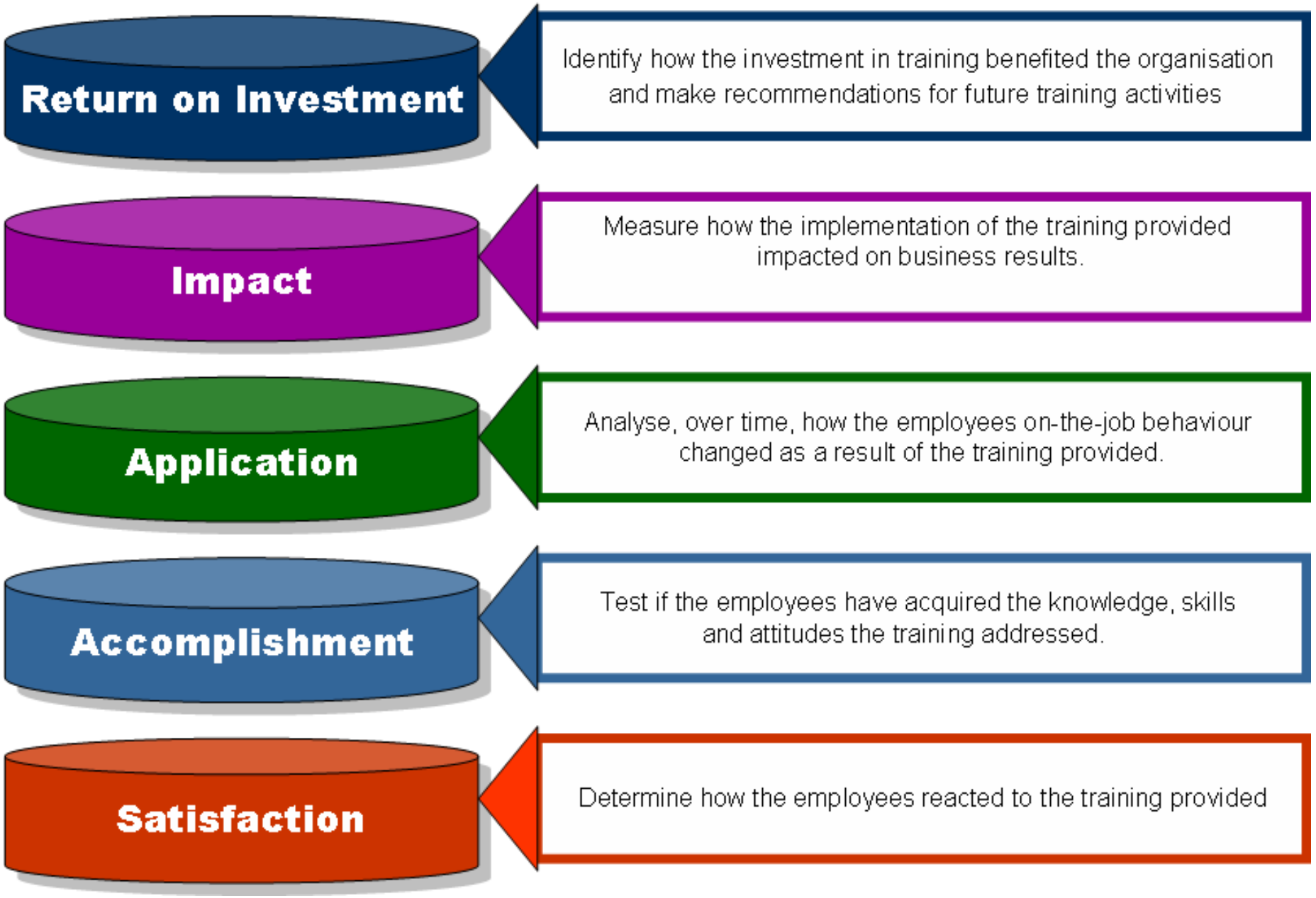

1235 46789 89001 56788

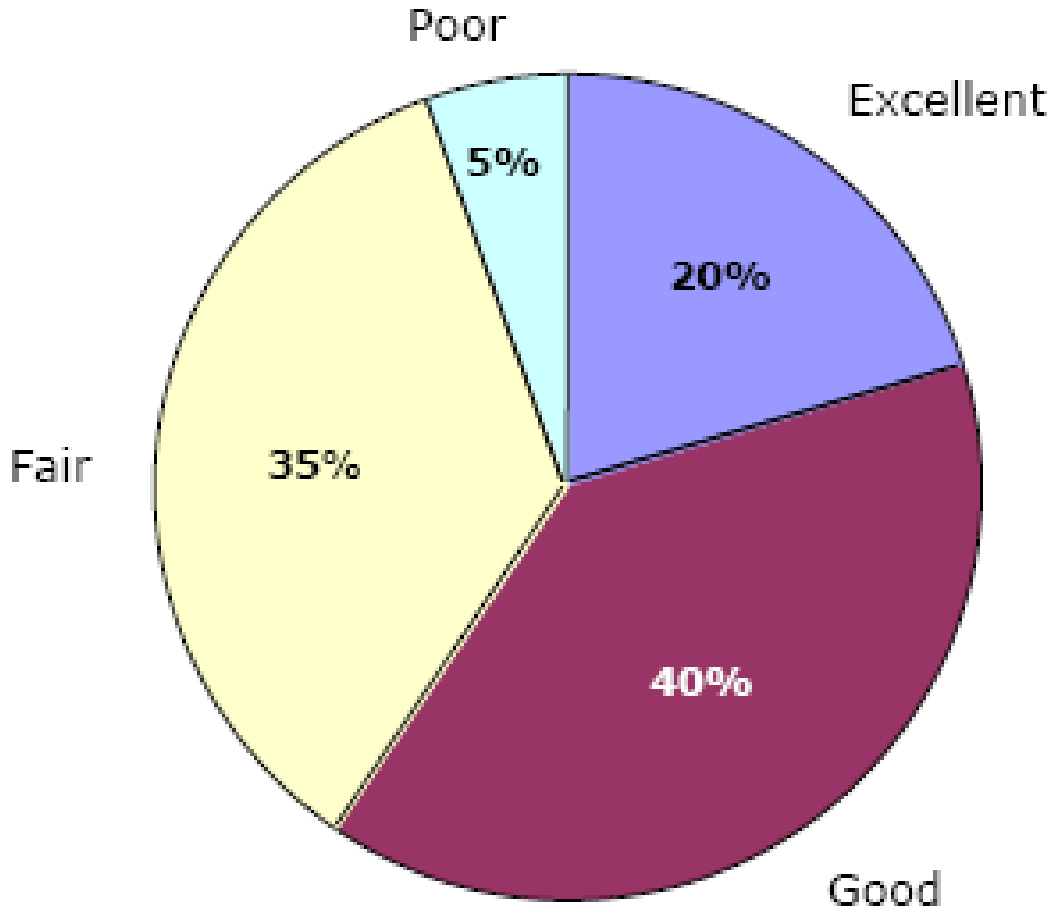

Compact Flash Card





Evaluation


Return on Investment
Identify how the investment in training benefited the organisation and make recommendations for future training activities
Impact
Measure how the implementation of the training provided impacted on business results.
Application
Analyse, over time, how the employees on-the-job behaviour changed as a result of the training provided.
Accomplishment
Test if the employees have acquired the knowledge, skills and attitudes the training addressed.
Satisfaction
Determine how the employees reacted to the training provided



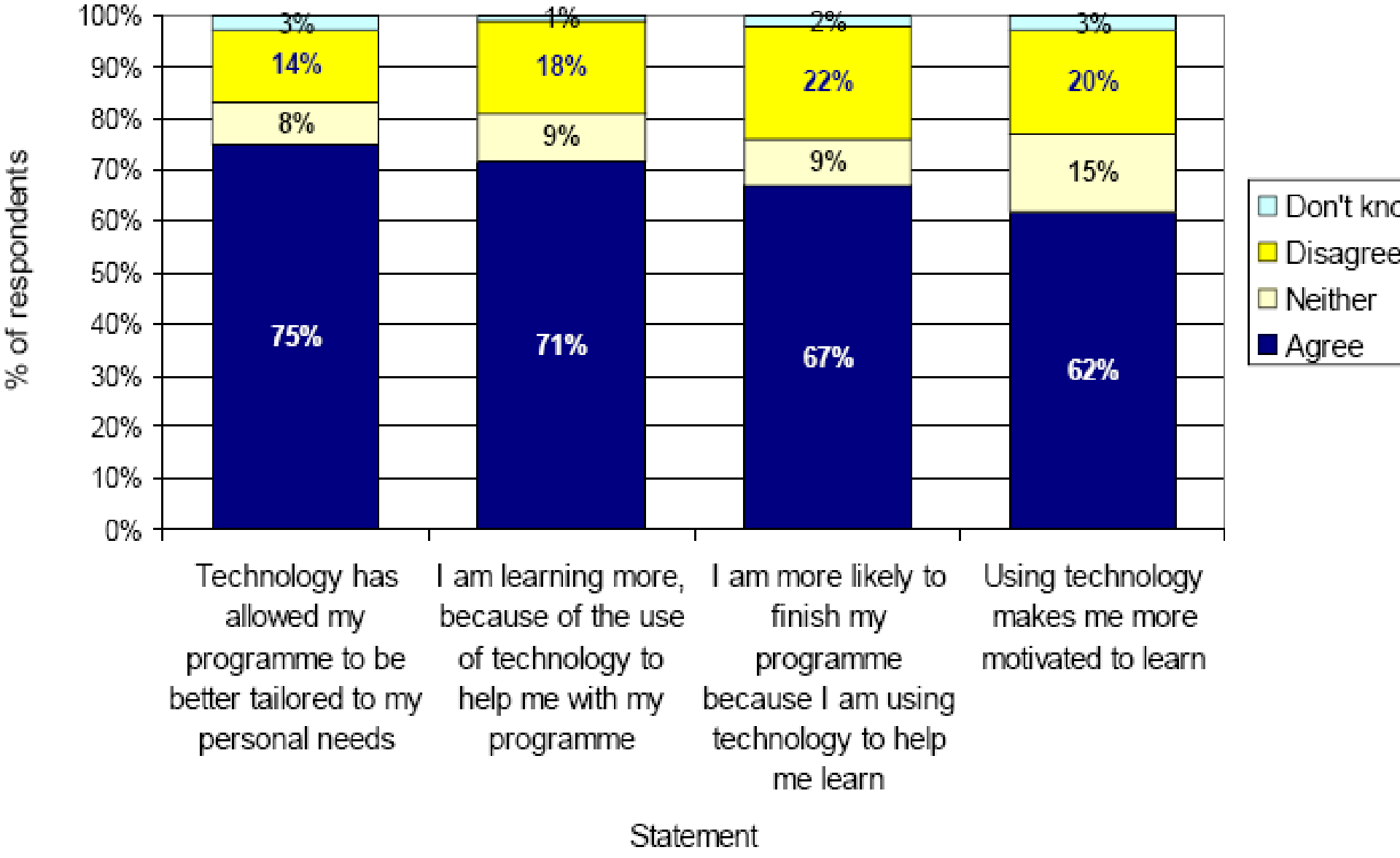
- Excellent (a win in terms of both cost savings and effectiveness)
- Good (saves some money, or costs the same but more effective than other training methods)
- Fair (break even financially and/or is no worse than other training methods)
- Poor (a waste of money)

Ratings of e-Learning Initiatives

Original Source: Barron, T. (2003) figure 7]

Statement	% Agree	% Disagree	% Neither agree nor disagree	% Don't know
I am confident I have the skills to use technology effectively for learning	96%	1%	1%	1%
I am able to get help from my training provider when I have problems using technology	87%	4%	8%	1%
Technology has allowed my Programme to be better tailored to my personal needs	75%	14%	8%	3%
I am learning more, because of the use of technology to help me with my Programme	71%	18%	9%	1%
I am more likely to finish my Programme because I am using technology to help me learn	67%	22%	9%	2%
Using technology makes me more motivated to learn	62%	20%	15%	3%
I would like to use technology more as part of my Programme	53%	24%	22%	1%

Original Source Cooper, C. (2007) Table 2) pvii



Original Source Cooper, C. (2007) Table 2) p31

	2 Days of Classroom Training		Blended
Training Component	**Cost per Learner**	**Total Cost**	**Total Cost**
Training, Design, Project Mgmt	$250	$250,000	$50,000
Learner Materials	$275	$275,000	$175,000
Facilitation Services	$175	$175,000	$75,000
Travel/Accomodations/Meals	$500	$500,000	$0
Sub-Total: Hard costs	**$1,200**	**$1,200,000**	**$300,000**
Employee Time off the Job	$800	$800,000	$400,000
Total Cost of Investment	**$2,000**	**$2,000,000**	**$700,000**
Performance Improvement		2%	7%
Value of Increase in Productivity	($100k salary)	$2,000,000	$7,000,000
Return on Investment (ROI)		**none**	**10x**

Original Source Snipes, J. (2005) Figure 4 p58]

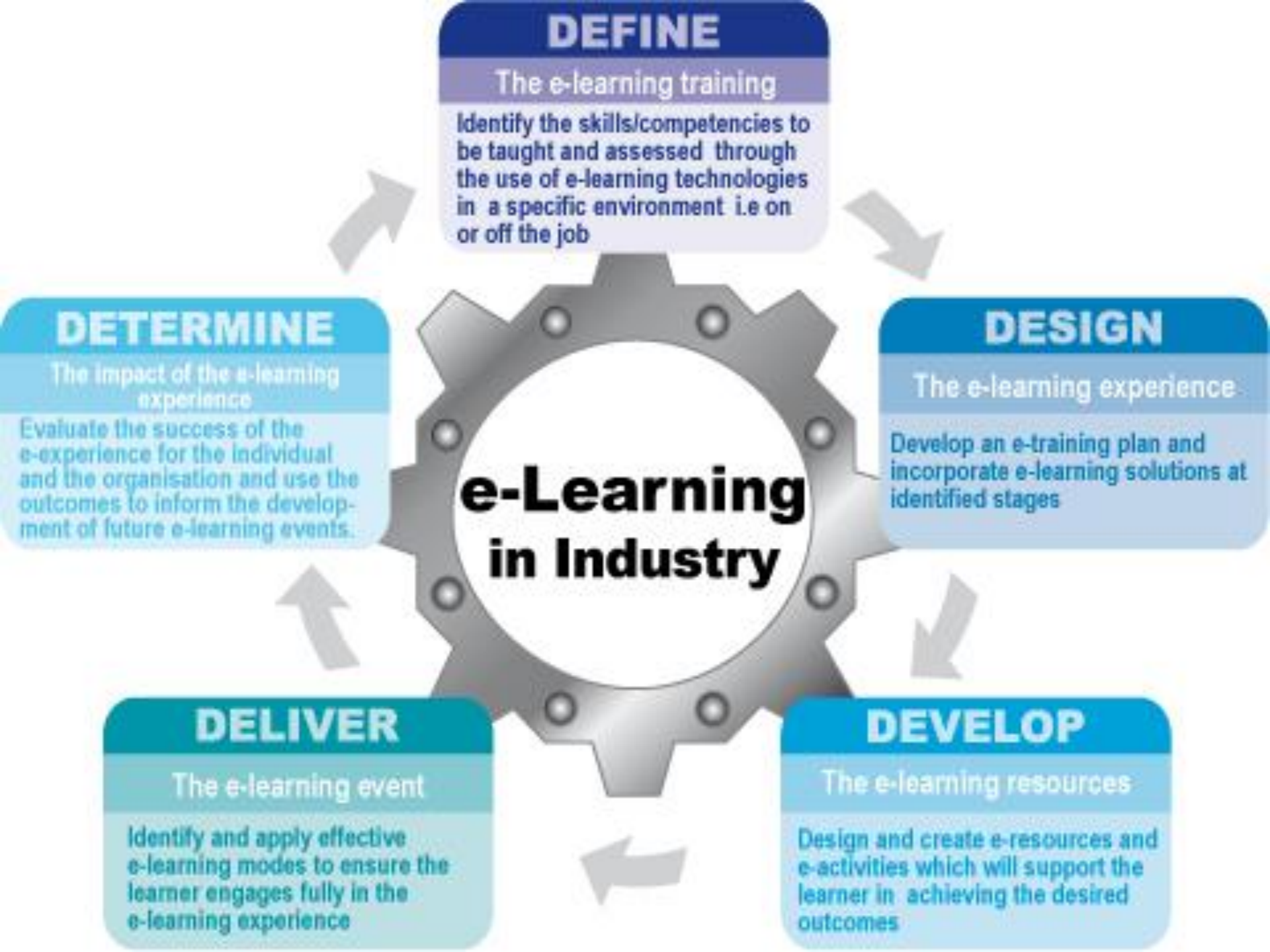
e-Learning for Industry

Just in time

Just enough

Just for them

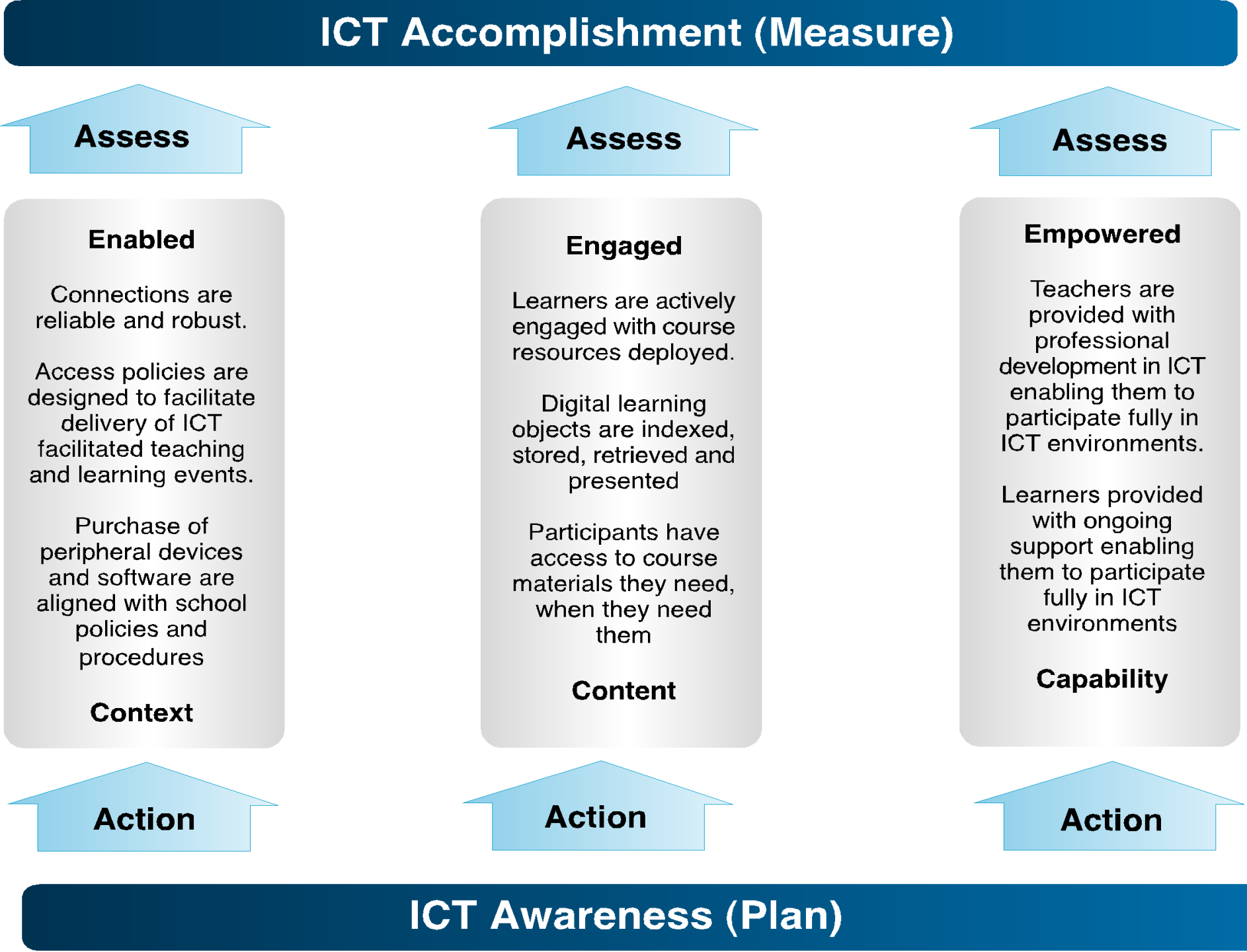
Critical Factors

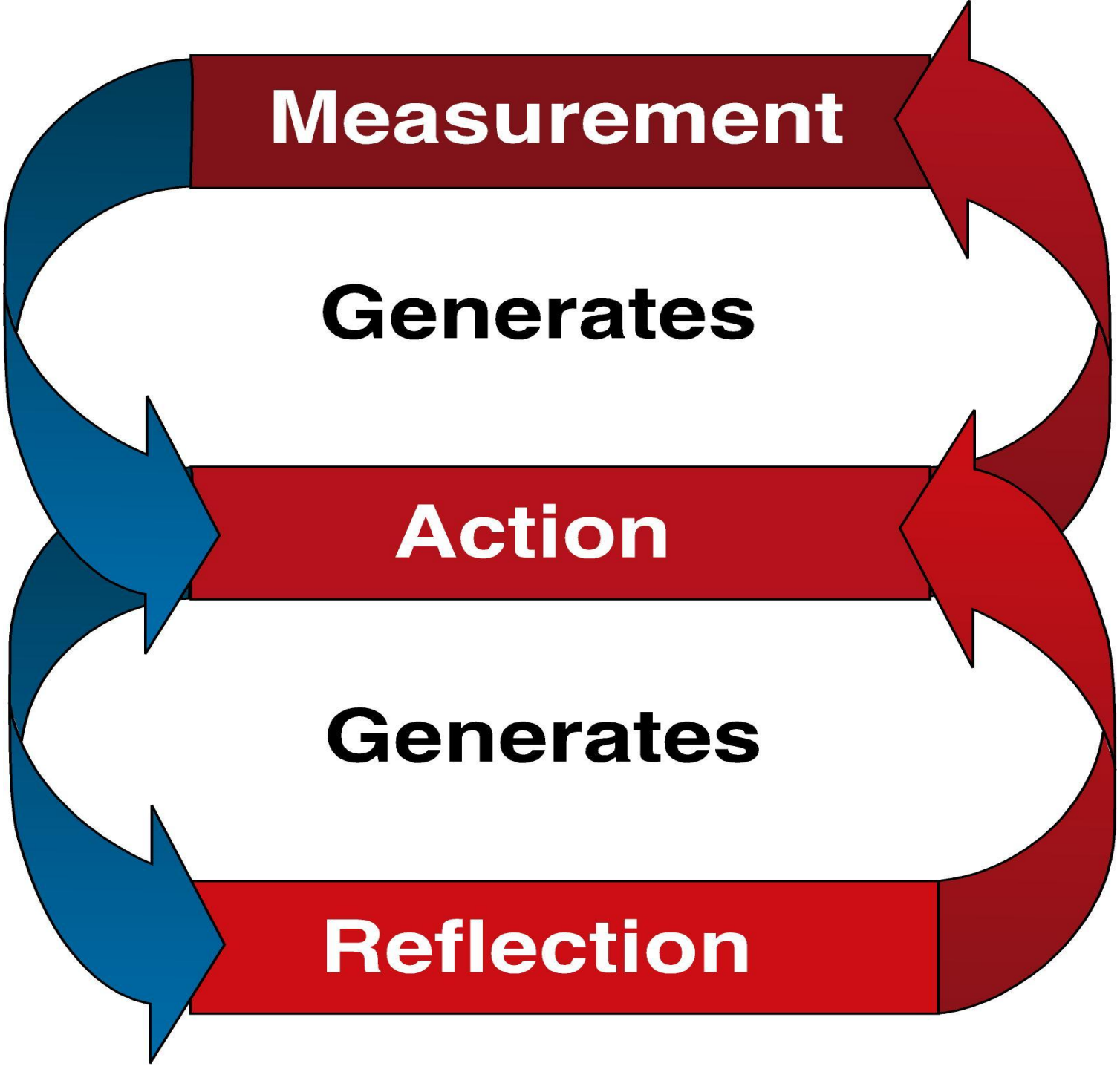

DEFINE
The e-learning training
Identify the skills/competencies to be taught and assessed through the use of e-learning technologies in a specific environment i.e on or off the job
DESIGN
The e-learning experience
Develop an e-training plan and incorporate e-learning solutions at identified stages
DEVELOP
The e-learning resources
Design and create e-resources and e-activities which will support the learner in achieving the desired outcomes
DELIVER
The e-learning event
Identify and apply effective e-learning modes to ensure the learner engages fully in the e-learning experience
DETERMINE
The impact of the e-learning experience
Evaluate the success of the e-experience for the individual and the organisation and use the outcomes to inform the development of future e-learning events.
e-Learning
in Industry

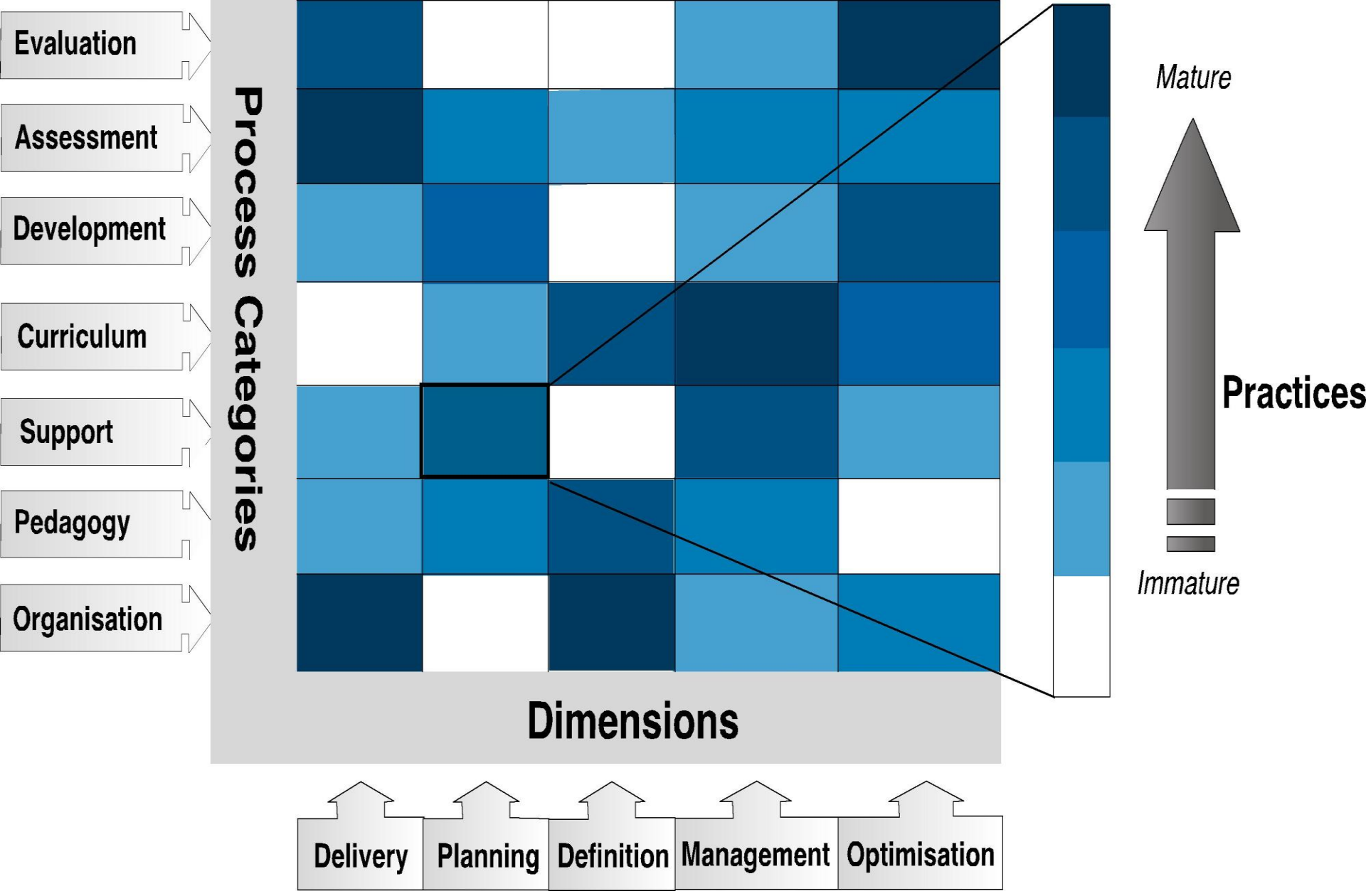
Capability

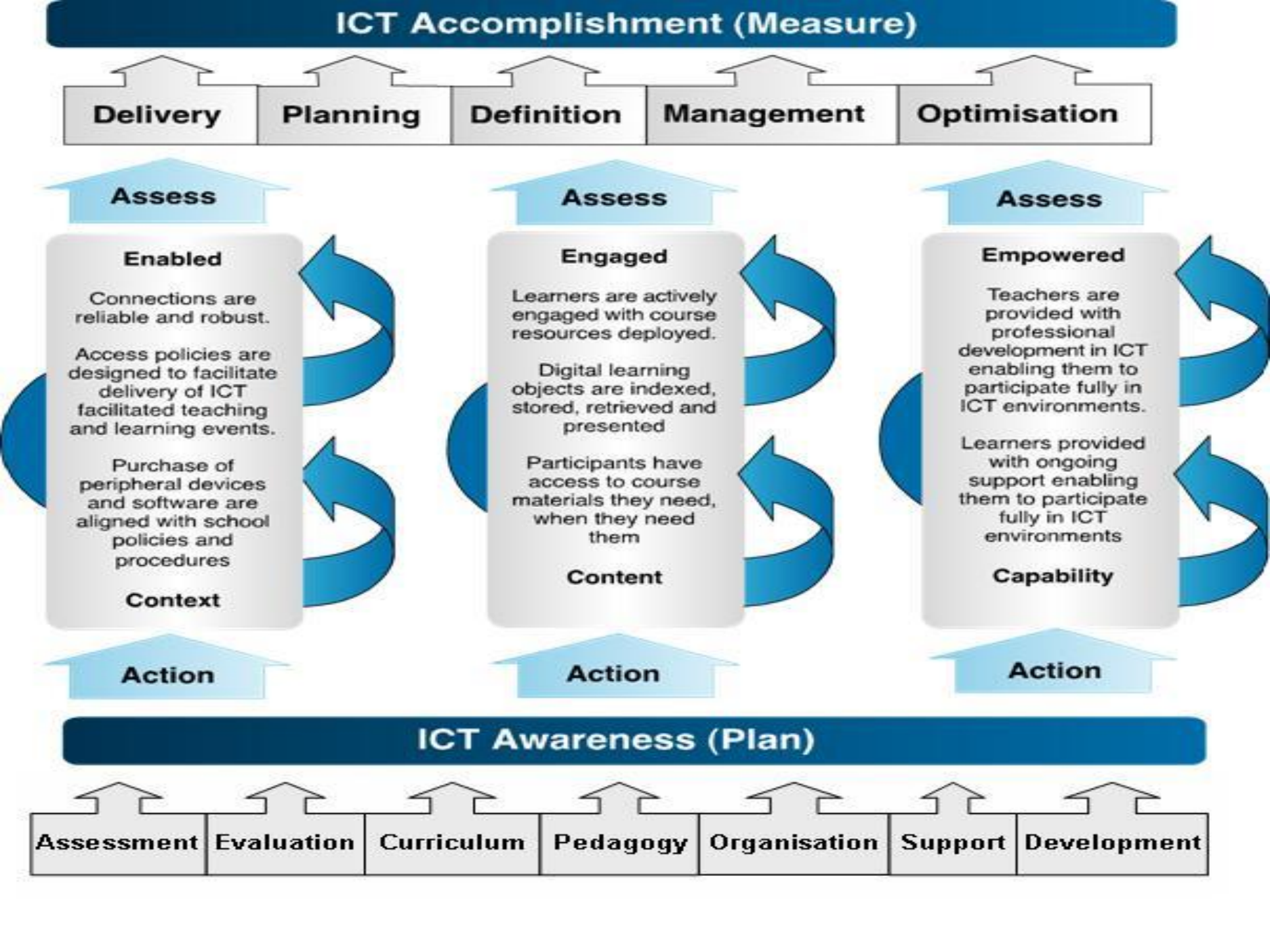
Connection

Content


ICT Accomplishment (Measure)
Assess
Assess
Assess
Enabled
Connections are reliable and robust.
Access policies are designed to facilitate delivery of ICT facilitated teaching and learning events.
Purchase of peripheral devices and software are aligned with school policies and procedures
Context
Engaged
Learners are actively engaged with course resources deployed.
Digital learning objects are indexed, stored, retrieved and presented
Participants have access to course materials they need, when they need them
Content
Empowered
Teachers are provided with professional development in ICT enabling them to participate fully in ICT environments.
Learners provided with ongoing support enabling them to participate fully in ICT environments
Capability
Action
Action
Action
ICT Awareness (Plan)


Measurement
Generates
Action
Generates
Reflection


Evaluation
Assessment
Development
Curriculum
Support
Pedagogy
Organisation
Process Categories
Dimensions
Delivery
Planning
Definition
Management
Optimisation
Mature
Practices
Immature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Curriculum
Pedagogy
Organisation
Support
Development


Questions