Risk Summary

	PPO reference model	
	Risk value as a % of total base cost	Risk Value (NPV terms)
ICT infrastructure	2.76%	R 10 767 517 030
Connectivity	0.02%	R 79 783 209
Curriculum and content	0.00%	R 16 779 227
Professional development	0.04%	R 170 144 998
Governance	3.95%	R 15 366 884 752
Financial	1.72%	R 6 693 173 070
Legal	0.80%	R 3 097 165 215
BEE	0.68%	R 2 664 978 735
	9.98%	**R 38 856 426 235**
NPV of PPO reference model before risk		**R 389 507 650 334**

	NPV terms Rand
NPV of PPO reference model (before risk)	R 389 507 650 334
NPV of risk (transferred and retained)	R 38 856 426 235
Risk-adjusted PPO reference model	**R 428 364 076 569**
Risk as a % of the total PPO reference model	9.98%

	PSC model	
	Risk value as a % of total base cost	Risk Value (NPV terms)
ICT infrastructure	8.88%	R 35 328 663 681
Connectivity	0.45%	R 1 776 205 186
Curriculum and content	0.08%	R 328 313 858
Professional development	0.28%	R 1 110 213 324
Governance	11.58%	R 46 060 938 027
Financial	4.98%	R 19 815 436 852
Legal	0.86%	R 3 409 067 774
BEE	0.68%	R 2 721 099 575
	27.80%	**R 110 549 938 276**
NPV of PSC model before risk		**R 397 673 455 747**

	NPV terms Rand
NPV of PSC model (before risk)	R 397 673 455 747
NPV of risk (transferred and retained)	R 110 549 938 276
Risk-adjusted PSC model	**R 508 223 394 023**
Risk as a % of the total PSC model	27.80%

Initial indication of Value for Money	Before risk adjustment Rand (NPV terms)	Risk adjustment Rand (NPV terms)	After risk adjustment Rand (NPV terms)
PSC model	R 397 673 455 747	R 110 549 938 276	R 508 223 394 023
PPO reference model	R 389 507 650 334	R 38 856 426 235	R 428 364 076 569
Initial indication of Value for Money	**R 8 165 805 413**		**R 79 859 317 454**
Initial Value for Money % indication	2.05%		15.71%

Legends

Inputs

Calculations

Outputs

In the individual worksheets this R value provides an indication of the risk value that will be added per annum for the period as indicated for this risk. This thus converts all the inputs into a Rand-value

Abbreviations used

LoP	Life of Project
PSC	Procurement based on "As Is", using existing processes and structures
PPO	Preferred procurement option as detailed in the Due Diligence Report of the e-Education Initiative
nDoE	National Department of Education
pDoE	Provincial Department of Education
DoE	nDoE and pDoE
BEE	Black economic empowerment
H	High
M	Medium
L	Low
SLA	Service level agreement
TA	Transaction advisor

Cost inputs PSC

	Pillars	Capex	Opex	Both
1	ICT Infrastructure	R 9 171 353 666	R 6 190 704 160	R 15 362 057 826
2	Connectivity	R 11 935 698 789	628 194 673.08	R 12 563 893 462
3	Curriculum and content	R 0	568 754 994.96	R 568 754 995
4	Professional development	R 0	728 730 914.77	R 728 730 915
5	Research monitoring and e	R 0	823 381 884.07	R 823 381 884
6	Governance	R 0	154 932 904.93	R 154 932 905
7	All	R 21 107 052 454	R 9 094 699 532	R 30 201 751 986
8	1, 2	R 21 107 052 454	R 6 818 898 833	R 27 925 951 287
9	1, 2, 3, 4	R 21 107 052 454	R 8 116 384 743	R 29 223 437 197
10	1, 3, 4	R 9 171 353 666	R 7 488 190 070	R 16 659 543 735
11	3, 4, 5	R 0	R 2 120 867 794	R 2 120 867 794
12	2, 4	R 11 935 698 789	R 1 356 925 588	R 13 292 624 376
13	1, 2, 4	R 21 107 052 454	R 7 547 629 748	R 28 654 682 202

Inputs from Financial Model

Total average cost per school per annum (real)	1 105 515.05
50.85%	R 15 362 057 826
41.59%	R 12 563 893 462
1.88%	R 568 754 995
2.41%	R 728 730 915
2.73%	R 823 381 884
0.51%	R 154 932 905
99.97%	
% breakdown per model	R 30 201 751 986
Total number of schools	27 328
Total cost financial model	R 604 230 971 880

Cost inputs PPO

	Pillars	Capex	Opex	Both
1	ICT Infrastructure	R 8 694 088 005	6 055 721 841.71	R 14 749 809 847
2	Connectivity	R 11 943 517 232	628 606 170.11	R 12 572 123 402
3	Curriculum and content	R 0	569 326 773.43	R 569 326 773
4	Professional development	R 0	729 463 519.60	R 729 463 520
5	Research monitoring and e	R 0	807 130 762.54	R 807 130 763
6	Governance	R 0	155 088 661.46	R 155 088 661
7	All	R 20 637 605 238	R 8 945 337 729	R 29 582 942 966
8	1, 2	R 20 637 605 238	R 6 684 328 012	R 27 321 933 249
9	1, 2, 3, 4	R 20 637 605 238	R 7 983 118 305	R 28 620 723 542
10	1, 3, 4	R 8 694 088 005	R 7 354 512 135	R 16 048 600 140
11	3, 4, 5	R 0	R 2 105 921 056	R 2 105 921 056
12	2, 4	R 11 943 517 232	R 1 358 069 690	R 13 301 586 922
13	1, 2, 4	R 20 637 605 238	R 7 413 791 531	R 28 051 396 769

Total average cost per school per annum (real)	1 082 871.66
49.84%	R 14 749 809 847
42.48%	R 12 572 123 402
1.92%	R 569 326 773
2.47%	R 729 463 520
2.73%	R 807 130 763
0.52%	R 155 088 661
99.97%	
% breakdown per model	R 29 582 942 966
Total number of schools	27 328
Total cost financial model	R 591 854 988 462

Likelihood of risk consequence occurring

H	15%
L	1%
M	10%

Note: The risk matrix contained H, M, L indicators, and the above table is used in order to convert risk to a Rand-value

Impact of consequence of risk for PPO

H	15%
L	5%
M	10%

Note: The above % were only used for professional development and curriculum and content

Real Values	PSC	PPO	Indicative cash saving per school per annum
Total average investment per school per annum (real)	1 105 515	1 082 872	22 643
Total average Risk adjustment cost per school per annum (real)	275 064	96 761	178 303
Total Average Risk adjusted cost per school per annum (real)	1 380 579	1 179 632	200 946

The total investment saving on cash basis between PSC and PPO is R22 643 per school on an annual basis, the total risk saving between PSC and PO is R178 303 per school on an annual basis. The combined saving between the PSC and PPO is R200 946 per school on an annual basis in real terms.

Nominal Values	PSC	PPO	Indicative cash saving per school per annum
Total average investment per school per annum (nominal)	2 570 536	2 517 345	53 190
Total average Risk adjustment cost per school per annum (nominal)	523 437	184 284	339 153
Total Average Risk adjusted cost per school per annum	3 093 973	2 701 630	392 343

The total investment saving on cash basis between PSC and PPO is R53 190 per school on an annual basis, the total risk saving between PSC and PO is R339 153 per school on an annual basis. The combined saving between the PSC and PPO is R392 343 per school on an annual basis in nominal terms.

ICT Infrastructure

R 10 288 676 441.17 R 3 355 522 400.20

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC Likelihood of consequence occurring (H, M, L) [during the term]	PSC Impact of consequence of risk [during the term]	PPO (after mitigation) Likelihood of consequence occurring (H, M, L) [during the term]	PPO (after mitigation) Impact of consequence of risk [during the term]	PSC Base cost that risk will be applied to (capex, opex or both)	PSC Risk value Excl timing and discount rate	PPO Base cost that risk will be applied to (capex, opex or both)	PPO Risk value Excl timing and discount rate	PSC Allocation of risk DoE	PSC Allocation of risk Contractor	PPO Allocation of risk DoE	PPO Allocation of risk Contractor
1	Costs overruns - Costs of transition - Acquisition costs - Development cost - Maintenance cost - Replacement/refreshment cost - Communication cost - Unanticipated price increases	The initiative costs more than anticipated.	LoP	8	Increased costs which may adversely affect the affordability of the initiative May have adverse effect on quality of service Potential risk of insolvency of Contractor due to penalties incurred	Fixed fee contract Experienced contractor Due diligence of financial model by TA and DoE Contractor to manage through fixed price contracts Indexation of costs at regular intervals (i.e. benchmarking)	H	10%	M	5%	Both	R 27 925 951 287	R 418 889 269.31	Both	R 27 321 933 249	R 136 609 666.25		100%	20%	80%
2	Technology change	Changes in technology and technical obsolescence leading to cost increases or change in operating procedures	LoP	1	User dissatisfaction Unscheduled replacements Disputes Technology not applicable for intended use	Research technology volatility Monitor change Provide technology review checkpoints Thorough planning Plan for some obsolescence Flexible arrangements	L	10%	L	10%	Capex	R 9 171 353 666	R 9 171 353.67	Capex	R 8 694 088 005	R 8 694 088.01	50%	50%	50%	50%
3	Service specification change by contractor	Change in service specification by the contractor	1 to 3	8	Institution dissatisfaction	As above [Technology change]	L	10%	L	10%	Both	R 27 925 951 287	R 27 925 951.29	Both	R 27 321 933 249	R 27 321 933.25	100%		80%	20%
4	Failure to meet performance or availability standards	Contractor fails financially or in terms of service delivery Service delivery does not meet standard set out in service specifications and (PPO) Agreement Unreasonable late delivery	LoP	8	Service discontinuity DoE dissatisfaction Disputes Strained relations between nDoE and pDoE	Service governance Service management tools incl SLAs Penalties Reporting	H	30%	L	30%	Both	R 27 925 951 287	R 1 256 667 807.92	Both	R 27 321 933 249	R 81 965 799.75	100%			100%
5	Incorrect definition of service Service specification unclear at outset Service specification change by DoE Service specification proofs to be inadequate in practice	A lack of participation by the DoE in the specification of services and applications could result in: - Lack of clear definition of the business purpose of the needed applications - Unrealistic scope (too high or too low) of the needed applications - Lack of clear description of the intended functionality of the developing application - Planning of application development with limited focus on future adaptability These factors could all lead to a service being delivered by the contractor that does not meet the DoE's requirements.	LoP	8	DoE dissatisfaction with solution Internal departmental stress (nDoE and pDoE) Sub-optimal solution Reputational damage Could result in delay completion of the initiative Cost implications	Stakeholder engagement Extensive verification of DoE positions (devil's advocacy) Detail planning for short term (0-3 years) Long-term flexibility in contract arrangements 'Forgiving' scope statements Clear service specifications	H	30%	M	10%	Both	R 27 925 951 287	R 1 256 667 807.92	Both	R 27 321 933 249	R 273 219 332.49	100%		100%	
6	Excessive use of ICT Infrastructure Under sized solution Migration of learners to schools with ICT	Possibility that a school may admit more learners than anticipated	LoP	8	Increased maintenance costs Affecting availability of service in the long term	Clear terms in the cooperative / enabling agreement with the school Equitable distribution and funding of ICT Appropriate support in development of School Technology Plans	M	10%	M	5%	Both	R 27 925 951 287	R 279 259 512.87	Both	R 27 321 933 249	R 136 609 666.25	100%		100%	
7	Multiple suppliers Technology diversity [by function or by area]	More than one supplier is involved in the delivery of the end-to-end solution (e.g.(i) by function: hardware, software, network operation, network infrastructure, or (ii) by province or area. Some services are internal, some are 3rd party	LoP	8	Fragmented solution No single point of accountability Service quality failures Customer dissatisfaction Various SMME involved in service delivery	Design solution to balance benefits and disadvantages of multiple suppliers	H	60%	H	30%	Both	R 27 925 951 287	R 2 513 335 615.85	Both	R 27 321 933 249	R 1 229 486 996.22	100%	0%	100%	0%

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
							Likelihood of consequence occurring (H, M, L) during the term	Impact of consequence of risk during the term	Likelihood of consequence occurring (H, M, L) during the term	Impact of consequence of risk during the term	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk DoE	Contractor	Allocation of risk DoE	Contractor
8	Single supplier [SACE and SITA]	One supplier or consortium provides all services for all provinces.	LoP	12	Single point of failure Average performance versus 'best-in-class' Price pass through	Design solution to balance benefits and disadvantages of single suppliers	L	40%	L	20%	Opex	R 1 356 925 588	R 5 427 702.35	Opex	R 1 388 069 690	R 2 716 139.38	100%		100%	
9	Initial pDoE discord [school]	A number of pDoE's do not believe the DoE's proposed solution is in their best interests	1 to 3	9	Delays Possible fragmentation of solution implementation Initiative objectives not met	Stakeholder management and engagement Clear value proposition for each pDoE Buy-in senior management Clearly defined governance structure	L	0%	L	10%	Both	R 29 223 437 197	R 0.00	Both	R 28 620 723 542	R 28 620 723.54	100%		100%	
10	pDoE discord [school] after initial phase	Provinces priorities shift owing to local imperatives during the term and become misaligned to the solution E.g. educational priorities, budgetary priorities, provincial economies of scale	LoP (beyond 3 yrs)	9	Complying and non-complying provinces become dissatisfied; Provinces want to withdraw; Material contract re-negotiations to retain provinces; Reputational damage	Encourage stakeholder participation in long-term Encourage substantive sign-on at the highest levels in provinces (ie premier); Solution flexibility	L	0%	L	15%	Both	R 29 223 437 197	R 0.00	Both	R 28 620 723 542	R 42 931 085.31	100%		100%	
11	Provincial readiness and adoption rates [+ schools]	Provinces (i) are at differing maturity levels; (ii) have different initial capacity to make use of the solution, and (iii) evolve capacity a varying rates	LoP	7	pDoE cannot exploit solution at rates agreed with contractor pDoE want financial recompense for unused capacity Fruitless expenditure Delays Contract variations	Stakeholder engagement and management; Strong contract management at nDoE and pDoE level	H	50%	M	5%	Capex	R 21 107 052 454	R 1 583 028 934.07	Capex	R 20 637 605 238	R 103 188 026.19	100%		100%	
12	Infrastructure readiness	3rd parties (power, telecom, school facilities etc) cannot be deployed / are not available as per the planned solution deployment rate	LoP	1	Fruitless expenditure Delays Contractor abdication	Appropriate planning Flexible solution Project monitoring and follow up	M	40%	M	15%	Capex	R 9 171 353 666	R 366 854 146.63	Capex	R 8 694 088 005	R 130 411 320.08	100%		100%	
13	Technology incompatibility	The technology deployed are not compatible with existing technologies in school	1 to 3	1	Inability of systems Interoperatibility leading to additional cost to integrate manually	Appropriate output specifications Norms and standards Good governance structures	H	5%	L	5%	Opex	R 6 190 704 160	R 46 430 281.20	Opex	R 6 055 721 842	R 3 027 860.92	100%		50%	50%
14	Dependence on existing contractors	A significant portion of existing services is provided by 3rd party contractors. During transition, service may deteriorate if contractors with key skills or key responsibilities terminate their contracts or fail to deliver service due to uncertainties in the environment.	1 to 3	8	Completions delays Affect service availability Cost implications	Involvement of other stakeholders Alignment of existing projects with current initiative Clear scope of this initiative in relation to existing projects	L	5%	L	5%	Opex	R 6 818 898 833	R 3 409 449.42	Opex	R 6 684 328 012	R 3 342 164.01	100%		100%	
15	Non-fixed payments due to flexibility required iro solution (scalability)	Affordability not pre-set for long term Fixed vs variable element of payment State of readiness of schools and provinces	LoP	9	Unpredictable changes in cost of initiative over the long term	Medium term contracts to be entered into with an appropriate level of price fixing but still allowing scalability Pre-determined scalability cost calculations	H	15%	M	15%	Both	R 29 223 437 197	R 657 527 336.93	Both	R 28 620 723 542	R 429 310 853.14	100%		50%	50%
16	Unlawful use of ICT Infrastructure	Unlawful activities in using ICT Infrastructure Liability due to people on-line Software piracy May result in civil liability	LoP	1	May result in costs implications May affect the availability of the service, e.g. Interdicts	Clear terms and conditions of use of ICT infrastructure Reasonable mechanisms be put in place to avoid occurrence	M	10%	L	10%	Both	R 15 362 057 826	R 153 620 578.26	Both	R 14 749 809 847	R 14 749 809.85	100%		100%	
17	Software	Selective migration to FOSS Education and FOSS software availability Support skills capacity	1 to 10	1	Inappropriate software Software not interoperable No level of standardization Increased support costs Government policies not supported	Detailed selective migration strategy to be undertaken Pre-approved list of software	M	80%	M	30%	Opex	R 6 190 704 160	R 495 256 332.79	Opex	R 6 055 721 842	R 181 671 655.25	50%	50%	50%	50%

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
							Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk [during the term]	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk [during the term]	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk		Allocation of risk	
																	DoE	Contractor	DoE	Contractor
18	Pre-conditions for ICT infrastructure deployment not met Dependency other departments fro basic infrastructure (buildings, electricity, etc)	ICT can not be deployed in schools due to pre-conditions not being met	1 to 5	1	Failure to deploy ICT in schools as planned and meet objectives of initiative	Planning Governance Co-ordination between departments Senior buy-in across government for initiative Clear guidance as to pre-condition requirements	M	30%	M	30%	Capex	R 9 171 353 666	R 275 140 609.97	Capex	R 8 694 088 005	R 260 822 640.16	100%		100%	
19	Theft Vandalism	Possibility that the ICT infrastructure will be damaged or stolen	LoP	1	Increased maintenance and replacement costs Affecting availability of service in the long term	Clear terms in the cooperative / enabling agreement with the school Security Insurance	H	50%	H	5%	Capex	R 9 171 353 666	R 667 851 524.92	Capex	R 8 694 088 005	R 65 205 660.04	100%		10%	90%
20	Learner and educator models	IT and CAT as push strategy may encourage schools to take-up where not necessary Early models (eg labs) may become outdated with newly pervasive options	1 to 5	1	Fruitless expenditure Technology obsolescence	e-Unit advice and guidance on practicality of deploying particular models School Technology Plans Governance	M	20%	M	15%	Capex	R 9 171 353 666	R 183 427 073.31	Capex	R 8 694 088 005	R 130 411 320.08	100%		100%	
21	Community use of schools (incl ICT infrastructure)	Community uses ICT facilities without abiding to policies around use	LoP	1	Increased maintenance costs Affecting availability of service in the long term	Policies around usage Pre-agreement with the community	H	5%	H	5%	Capex	R 9 171 353 666	R 68 785 152.49	Capex	R 8 694 088 005	R 65 205 660.04	50%	50%	50%	50%

Connectivity

													R 914 651 444.01				R 102 462 805.73			
Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Filter that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC		PSC		PPO		PSC		PPO	
							Likelihood of consequence occurring (H, M, L) (during the term)	Impact of consequence of risk	Likelihood of consequence occurring (H, M, L) (during the term)	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
1	Implementation of initiative is other government institutions combined responsibility DoE implements networks without involvement of other responsible government institutions	The implementation of networks also involves Department of Communication, Department of Science and Technology, SITA (DPSA). The risk concerns a non-integrated approach without taking other departments and institutions into account DoE adopts a go-it-alone policy	1 to 3	2	Delays in deployment pending agreement Conflicting requirements Obstacles to implementation Political interference Delays Provincial objections Sub-optimal solution	Stakeholder engagement Clear understanding of SITA's, GITO's and other influencing policies Obtain stakeholder guidance and support for solutions	M	30%	L	5%	Capex	R 11 935 696 769	R 398 070 803.06	Capex	R 11 943 517 232	R 5 971 796.62	100%		100%	
2	Shared network use	Solution results in sharing of network infrastructure with other institutional entities [WAN and last mile]	LoP	2	Contractor abdication fro SLAs Sub-optimal performance Divided responsibilities	Careful network design with QOS (quality of service) and bandwidth management Suitably drafted SLAs Single dedicated VPN	H	20%	L	1%	Both	R 12 563 893 462	R 376 916 803.86	Both	R 12 572 123 402	R 1 257 212.34	100%			100%
3	Technology change	Changes in technology and technical obsolescence leading to cost increases or change in operating procedures	LoP	2	User dissatisfaction Unscheduled replacements Disputes Technology not applicable for intended use	Research technology volatility Monitor change Provide technology review checkpoints Thorough planning Plan for some obsolescence Flexible arrangements	L	10%	L	10%	Opex	R 628 194 673	R 628 194.67	Opex	R 628 606 170	R 628 606.17	50%	50%	50%	50%
4	Supplier capacity (private sector supply) [last mile]	The private sector does not have the existing capacity to deploy the last mile required as per the requirements of this initiative	1 to 4	2	Delays Possible fragmentation of solution implementation Initiative objectives not met Increased cost (monopolistic environment)	Market aware of initiative Approved short-list of suppliers Prices negotiated at national level (economies of scale)	H	30%	H	30%	Opex	R 628 194 673	R 25 268 760.29	Opex	R 628 606 170	R 26 267 277.65	100%		50%	50%
5	Supply capacity (SITA)	SITA does not have the existing capacity to deploy the WAN required as per the requirements of this initiative	1 to 4	2	Delays Initiative objectives not met Increased costs	Dedicated SITA business unit PPO specific contractual arrangement based on PPP principles, not only standard agreement	H	80%	H	20%	Opex	R 628 194 673	R 75 383 360.77	Opex	R 628 606 170	R 18 858 785.10	100%		20%	80%
6	Network infrastructure unavailability	The private sector or SITA does not have the existing infrastructure to deploy the last mile required as per the requirements of this initiative	1 to 5	2	Delays Possible fragmentation of solution implementation Initiative objectives not met Increased cost	Mitigation proposed in PPO	H	10%	L	5%	Opex	R 628 194 673	R 9 422 920.10	Opex	R 628 606 170	R 314 303.09	100%		20%	80%
7	Integration risk	Schools already connected through existing projects (incl Dinaledi schools)	1 to 3	2	Possible fragmentation of solution implementation Initiative objectives not met Increased cost Extended transition period	Minimum norms and standards	H	70%	H	50%	Opex	R 628 194 673	R 65 880 440.67	Opex	R 628 606 170	R 47 145 462.76	100%		100%	

Curr & Content

							PSC		PPO (after mitigation)		PSC		R 128 663 247.69	PPO		R 7 709 047.14	PSC		PPO	
Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "Input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	Likelihood of occurrence occurring (H, M, L) [during the term]	Impact of occurrence of risk	Likelihood of occurrence occurring (H, M, L) [during the term]	Impact of occurrence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Exd timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Exd timing and discount rate	Allocation of risk DoE	Contractor	Allocation of risk DoE	Contractor
1	Location of e-Education curriculum and content team within national department	Locating the chief director of Curriculum and Content in the e-Education branch, with e-Education directors located in the relevant curriculum and content directorates in the other Branches (eg GET, FET schools, and FET Colleges)	LoP	3	This may result in managerial conflicts and insufficient leverage over curriculum and content issues for the e-Education curriculum and content chief director	Primary managerial reporting of directors is through the relevant directorate to ensure that e-Education is integrated into the functioning of these directorates. Secondary reporting is to the e-Education branch	M	15%	L	15%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 853 990.16	100%		100%	
2	Planned access to ICT infrastructure insufficient to support curriculum	Resourcing requirements for ICT to support the attainment of the curriculum (Tender A curriculum and content) far exceeds the planned ICT infrastructure for schools and colleges	LoP	3	There is insufficient investment in e-Education in the foreseeable future for schools to integrate ICT across the entire curriculum	The Curriculum and Content team should be able to prioritise curriculum statements where ICTs are considered essential and focus on these.	H	10%	M	1%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 569 326.77	100%		100%	
3	FOSS migration compromises current digital LTSM market	The FOSS migration strategy advocates for open source only within a predefined period.	LoP	3	This may render the investments already made in e-LTSMs by schools, and the curriculum resources on Thutong no longer usable or valid	All investments in curriculum resources and priority content development to be created to operate on open source platforms.	H	10%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.39	100%		100%	
4	Provincial response to e-LTSM credits (pull strategy)	Provinces do not value or invest in e-LTSMs.	LoP	3	e-LTSM credits are not allocated from provincial budgets. National department cannot allocating matching e-LTSM credits	Change management strategy to address shift to e-LTSM credit system with motivation for need for a content pull strategy which supports the publishing and materials development industries	L	15%	L	5%	Opex	R 568 754 995	R 853 132.49	Opex	R 569 326 773	R 284 663.39	100%		50%	50%
5	Matching provincial e-LTSM credits	Matching provincial e-LTSM credits creates further inequality between provinces.	LoP	3	Provinces able to allocate and administer e-LTSM credits are rewarded with matched funds from national. Provinces unable to allocate e-LTSM credits receive no national e-LTSM credit funding.	A system of matching e-LTSM credits funding will be adopted at the outset with the simultaneous change management and professional development interventions for provincial and district level departmental staff. This may be shifted to a system of weighted support for provinces not able to allocate and administer e-LTSM credits.	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.39	100%		100%	
6	Provincial response to curriculum and content push strategies	Provinces view the curriculum and content push strategies such as the Thutong portal and investments in priority content areas with suspicion and do not feel they add value to their context.	LoP	3	Provinces do not support national push for freely available curriculum resources and building communities of practice. The availability of Learning Space managers from within provinces and district structures hampers content management and development on Thutong	Provinces to be engaged in developing terms of reference for Learning Space management and priority content investments	M	15%	L	1%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 56 932.68	50%	50%	50%	50%
7	e-LTSMs are treated as distinct from LTSMs	e-LTSMs are not integrated into existing LTSM approval and procurement processes. A parallel system adds bureaucracy and to the existing system.	1 to 3	3	e-LTSMs are treated as distinct from the rest of the LTSM system. The e-LTSM system is seen as an e-Education Initiative process and not a system wide strategy.	e-LTSM process is to take place through the existing LTSM structures and building on existing processes	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.39	50%	50%	50%	50%

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							Likelihood of occurrence (H, M, L) [during the term]	Impact of occurrence of risk	Likelihood of occurrence occurring (H, M, L) [during the term]	Impact of occurrence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
8	e-LTSM credits not integrated into departmental systems	e-LTSM credits are not integrated into the LTSM and curriculum support plans for national, provincial and school of College level procurement of LTSMs.	LoP	4	Schools and FET Colleges fail to use e-LTSM credits and so learners and educators do not have access to a wide range of learning materials to support the objectives of the e-Education Initiative.	Departmental integration is prerequisite for e-LTSM system	M	15%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	50%	50%	50%	50%
9	Delays in establishing the e-LTSM approval and e-LTSM credits system	Setting up the systems and capacity at national Department of Education to integrate e-LTSM approval into the existing system and manage e-LTSM credits takes longer than expected.	1 to 3	3	This delays implementation of e-Education content push strategies that support the publishing and materials development market	e-LTSM credit system to be adopted to presented to publishing and materials development industry stakeholders and private sector invited to support set up process.	M	10%	L	5%	Opex	R 568 754 995	R 5 687 549.95	Opex	R 569 326 773	R 284 663.39	50%	50%	50%	50%
10	e-LTSM credits logistically cumbersome to administer	Administration of e-LTSM credits is to bureaucratic and cumbersome.	1 to 3	3	Schools, colleges and provinces do not ascribe value to the e-LTSM credit system. e-LTSMs are not bought and publishing and materials development industries suffer and/or do not innovate	Simple process involving publishing and materials development industries to align with the provinces in administration of e-LTSM credits is required. This is to align with LTSM ordering system	M	10%	L	5%	Opex	R 568 754 995	R 5 687 549.95	Opex	R 569 326 773	R 284 663.39	50%	50%	50%	50%
11	e-LTSM credits judged to be ineffective early on in project	e-LTSM credit system may be judged not to be effective too early in the project – before schools and Colleges have access to the ICT equipment required to use e-LTSMs	1 to 4	3	Schools may not be able buy e-LTSMs at the point when they gain access to ICT equipment, as the system has been withdrawn too early.	e-LTSM system to be established, but success only to be judged when majority of schools have adequate access to ICTs. Moneys not spent should by rolled over and accumulate for the later adopters.	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.39	50%	50%	50%	50%
12	Investments in priority content areas spread too thin	Unrealistic expectation is created for comprehensive curriculum support for the entire curriculum in schools and colleges and so content management and development resources are spread too thin.	LoP	3	The overaching objective is to provide support in ICT integration across all curriculum statements in schools and FET Colleges. However this may result in poor quality of content and support as resourcing is spread too thin. ICT curriculum integration is not taken seriously as it is unattainable across all curriculum statements.	The long term goal should be comprehensive curriculum coverage. This should not be done at the expensive of quality of content developed. National department of Education should expect to prioritise curriculum statements for ICT integration and curriculum support.	M	10%	L	1%	Opex	R 568 754 995	R 5 687 549.95	Opex	R 569 326 773	R 56 932.68	50%	50%	50%	50%
13	SITA is unable to provide necessary pricing and service levels for hosting of Thutong	The SITA hosting service for Thutong is not technically adequate, or is too expensive. It is not commercially competitive.	LoP	3	Thutong suffers from technical problems with the site being down or accessing resources being slow. Costs of hosting are not affordable.	SITA is to ensure that hosting offerings are commercially competitive. The three yearly hosting contracts, will be used to monitor and enforce service level agreements. In the absence of the necessary service and hosting, Thutong is to moved to an alternative hosting provider.	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.39		100%		100%
14	Technical maintenance and development for Thutong not adequate	Technical maintenance and development for Thutong portal is either not at the required level, or does not of keep pace with Irapid developments in ICT functionality	LoP	3	Thutong is slow, and not-user friendly. It seems dated in comparison to other commercially educational run websites	Ongoing investments are to be made in maintenance and development of Thutong. Complete technical overhaul is planned for every three years	L	15%	L	1%	Opex	R 568 754 995	R 853 132.49	Opex	R 569 326 773	R 56 932.68		100%		100%

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15	Delays in developing curriculum guides and resourcing plans	Delays in the award and completion in Curriculum and Content Tender A: Review of the current curriculum to develop guidelines, assessment tools, and resourcing plans:	1 to 3	3	This has a knock on effect to all content and curriculum development strategies as content statements cannot be grouped and no prioritisation of curriculum areas is possible	Curriculum and content Tender A to be prioritised and fast tracked building policy existing guidelines for teachers	L	15%	L	1%	Opex	R 568 754 995	R 853 132.49	Opex	R 569 326 773	R 56 932.68	100%		100%	
16	Priority content development tenders considered unfair by the materials development and publishing industries	Curriculum and content Tender C: Content development tenders for priority content development processes is challenged as undermining the publishing and materials development industry and unfair government intervention	1 to 3	3	The content investment process is delays while legal proceedings are underway. Neither government nor private sector invests in e-LTSMs, except through communities of practice on Thutong.	If situation arises content development may continue, but not be comprehensive coverage. Content is going to be used by South African schools and colleges, and created by the department of Education under creative commons license. There are to be no commercial spin offs within the country. The inclusion of e-LTSMs to support the industry should be raised as stimulating commercial competition in this arena.	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.36		100%		100%
17	South African publishing industry undermined or collapses due to changes in LTSM procurement processes	With the priority investments in LTSMs (largely print based), to support the curriculum, publishers may not have a market to sell their textbooks in the current way.	LoP	3	As the South African publishing industry is dependent on the schools market to support the much smaller book market this can have significant impact on strength of the publishing industry and the availability of South African published books.	The current competition takes place at the point of sale with substantial risk to the publisher. Publishing industry can be engaged in the content development process and invited to compete at point of development and at point of production. By engaging they are forewarned of the need to adjust their business models and the changing schools market landscape.	M	15%	L	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 284 663.36	50%	50%	50%	50%
18	Lack of content in South African languages other than English	Content available on Thutong, through priority content development processes and for purchases using e-LTSM credits dominated by English language materials	1 to 5	3	Materials are English dominated and African languages are devalued, and first language speakers of other African languages are further disadvantaged	Investments in the development and adaptation of materials in languages other than English – particularly in Foundation and Intermediate phases must be priority on content strategy and focuses on early in the project. Seconded educators that have African language expertise to be sued for translation and management of identified Thutong Learning Spaces as a priority	H	15%	M	5%	Opex	R 568 754 995	R 12 796 987.39	Opex	R 569 326 773	R 2 846 633.87	100%		100%	

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							PSC		PPO (after mitigation)				PSC		PPO		PSC		PPO	
												R 344 562 217.25				R 47 643 347.28				
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1	Location of e-Education professional development team within national department	Locating team within the Teacher Education and Development Directorate within the General Education and Training Branch,	LoP	4	May result in insufficient collaboration on professional development fr non educators and FET educators	e-Education Professional Development chief direct is to be located in dedicated e Education branch. While staff will work in the teacher Education and Development Directorate their work should include collaborating with all relevant branches	M	15%	L	15%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 1 094 195.28	100%		100%	
2	Provincial response to e-PD credits (pull strategy)	Provinces do not value or invest in ICT related professional development.	LoP	4	e-PD credits are not allocated from provincial budgets. National department cannot allocating matching e-PD credits	Change management strategy to address shift to e-PD credit system with motivation for need for a professional development pull strategy	M	15%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	100%		100%	
3	Provincial response to professional development push strategies	Provinces view the professional development push strategies such as ICT leadership training and support for districts, schools managers and FET Colleges with suspicion and do not feel they add value to their context.	1 to 3	4	Provinces do not support national push for e-Education professional development. The adhoc and fragmented approach which differs significantly from Province to province continues	Provinces to be engaged in developing terms of reference for professional development expanded guidelines as well as push strategy processes for design of programmes	M	15%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	100%		100%	
4	CPTD points linked to e-Education and not professional development in general	Implementation of the CPTD points system through SACE creates an apparent parallel system of professional development for e-Education.	1 to 3	4	As e-Education is the for-CPTD system it is mistakenly treated as distinct from the rest of the system. The CPTD system is seen as an e-Education Initiative process and not a system wide strategy.	SACE role in system wide shift and using e-Education as a pilot is to be made clear from outset	M	10%	L	1%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 72 946.35	80%	20%	80%	20%
5	Matching provincial e-PD credits	Matching provincial e-PD creates further inequality between provinces.	LoP	4	Provinces able to allocate and administer e-PD credits are rewarded with matched funds from national. Provinces unable to allocate e-PD credits receive no national e-PD credit funding.	A system of matching e-PD credits funding will be adopted at the outset with the simultaneous change management and professional development interventions for provincial and district level departmental staff. This may be shifted to a system of weighted support for provinces not able to allocate and administer e-PD credits.	M	15%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	50%	50%	50%	50%
6	Insufficient district level capacity to support schools	Although the draft Post Provisioning Norms for Districts of January 2008 policy is adopted largely unchanged, there is a substantial delay in the recruitment and appointment of the envisaged approximately 90 curriculum support staff at district level.	LoP	4	e-Education professional development support to districts is delayed and this delays in schools and Colleges in all of their Educational Technology Planning processes. There is inadequate support to schools from district level	Professional development support to districts is resourced in a rolling three ear cycles to accommodate new intake and changes in district capacity.	H	30%	M	15%	Opex	R 728 730 915	R 32 792 891.16	Opex	R 729 463 520	R 10 941 952.79	100%		100%	
7	Insufficient district level capacity to support FET colleges	District offices focus solely on schools	LoP	4	There is inadequate support available at district level for FET Colleges	With only 50 FET Colleges nationally support can be provided from national and provincial structures and need not depend on district	H	15%	M	5%	Opex	R 728 730 915	R 16 396 445.58	Opex	R 729 463 520	R 3 647 317.60	100%		100%	

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8	Delays in establishing CPTD points and e-PD credits system	Setting up the systems and capacity at SACE to manage CPTD points and e-PD credits for both educators and non educators takes longer than expected.	1 to 3	4	This delays implementation of e-Education push strategies	e-Education push strategies are to be prioritised as fore-runner in the CPTD pilot process.	M	10%	L	1%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 72 946.35	50%	50%	50%	50%
9	SACE conflict in administering e-PD for non educators	SACE is unable to take on administration of CPTD points system for non educators (due to for example capacity or , legislative constraints, or stakeholder objectives.	1 to 3	4	SACE is unable to administer non educator CPTD points system	Alternative location for CPTD points system is to be identified and conducted in collaboration with SACE	M	10%	L	1%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 72 946.35	20%	80%	20%	80%
10	HEIs not held accountable	HEIs do not meet their obligations to to equip educators entering the profession with ICT skills.	LoP	4	New educator recruits are still not ICT capably	Professional development credit allocations may be increased to allow new recruits to access e-Education professional development	M	10%	L	5%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 364 731.76	100%		100%	
11	e-PD credits logistically cumbersome to administer	Administration of e-PD credits is to bureaucratic and cumbersome.	1 to 3	4	Schools, colleges and provinces do not ascribe value to the e-PD credit system. Educators do not access e-PD offerings and are unable to integrate ICT into their classrooms	Simple process involving professional development providers and provinces in administration of e-PD credits is required	M	10%	L	5%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 364 731.76	50%	50%	50%	50%
12	FET college enrolment targets	Targets for FET College enrolment levels are not met.	LoP	4	E-PD credit allocations for FET Colleges are unspent as college sizes a smaller than expected.	Annual adjustments on e-PD credits by schools size may be made.	H	5%	L	1%	Opex	R 728 730 915	R 5 465 481.86	Opex	R 729 463 520	R 72 946.35	100%		100%	
13	e-PD credits not integrated into departmental systems	e-PD credits are not integrated into the professional development and HR development plans for national, provincial and district level staff in the Department of Education.	LoP	4	Departmental officials (national, provincial and district) fail to access e-Education professional development offerings and not equipped to support the objectives of the e-Education Initiative.	Departmental integration is prerequisite for e-PD system	M	15%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	50%	50%	50%	50%
14	Delays in developing expanded guidelines for ICT competency levels	Delays in the award and completion in Tender A: Development of Expanded guidelines for ICT competency levels	1 to 3	4	This has a knock on effect to all professional development strategies as suitable professional development programmes and support mechanisms cannot be developed.	Tender A to be prioritised and fast tracked building policy existing guidelines for teachers	M	10%	L	1%	Opex	R 728 730 915	R 7 287 309.15	Opex	R 729 463 520	R 72 946.35	50%	50%	50%	50%
15	Insufficient professional development and/or professional development agency capacity	There is insufficient professional development capacity to offer district level ICT leadership and support (in terms of course design, facilitation and or mentoring)	LoP	4	District level ICT leadership and support cannot be provided nationally, and districts are not able to support schools	Existing professional development service providers are to be engaged early on and make use Tender A guidelines for districts	L	15%	L	5%	Opex	R 728 730 915	R 1 093 096.37	Opex	R 729 463 520	R 364 731.76	20%	80%	20%	80%
16	Educational Technology planning not integrated with FET College recapitalisation planning	The Educational Technology Planning process is not integrated into the institutional management of FET Colleges as it has been introduced afer the re-capitalisation process.	LoP	10	ET managers are unable to manage the requirements for both processes. FET Colleges do not complete and implement Educational Technology Plans	e-Education branch to have dedicated staff to focus on FET Colleges and work with Public FET Colleges directorate	M	15%	L	5%	Opex	R 7 488 190 070	R 112 322 851.04	Opex	R 7 354 512 135	R 3 677 256.07	50%	50%	50%	50%
17	Professional development	Many key stakeholders (DOE officials, school managers and administrators, and teachers) lack the skills and competences needed to leverage the ICT investment to achieve create efficiencies and enhance systemic productivity	LoP	4	Without professional development, the technology will not be optimally used, and there is further likely to be resistance to its use at all levels.	Integrate ongoing professional development – based on international best practice – into the project design.	M	15%	L	15%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 1 094 195.26	100%		100%	

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18	Budget priorities	Overruns in spending on ICT infrastructure and networking lead to budget cuts in curriculum, innovation, professional development, and research	LoP	11	Without investments in curriculum innovation, professional development, and research, it will not be possible to achieve the educational objectives of the project	Management mechanisms to prevent re-allocation of line items in budget away from these critical areas	H	15%	M	10%	Opex	R 2 120 867 794	R 47 719 525.36	Opex	R 2 105 921 056	R 21 059 210.56	100%		100%	
19	Teacher job definitions	Job definitions of teachers are not modified to reflect changing responsibilities, particularly for those teachers expected to take the lead in ICT integration in schools	LoP	3	High levels of resistance to use of technology at school level	Integrate specific ICT responsibilities into teacher job responsibilities Make financial provision for additional payment to teachers who take on function of ICT Champion at schools	H	10%	M	5%	Opex	R 568 754 995	R 8 531 324.92	Opex	R 569 326 773	R 2 846 633.87	100%		100%	
20	Changing role of teachers [buy-in and training]	If teacher professional development does not focus increasingly on the professional role of teachers as mentors and adult role models rather than focusing on teacher ICT skills and use of ICT in classrooms, learners will not be adequately prepared to cope with the demands of the information society	LoP	4	Without this shift in thinking about the role of teachers, the educational potential of the investment will be lost. Further, it will exacerbate online safety and security risks as the network is rolled out.	Significant changes to pre-service and in-service teacher training models needs to be planned with the teacher education sector and integrated into all professional development. The same applies to principals' training. Extended mentorship models should also be integrated into the overall professional development approach	H	10%	L	5%	Opex	R 728 730 915	R 10 930 963.72	Opex	R 729 463 520	R 364 731.76	100%		100%	

Governance

							PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
													R 14 596 139 549,55			R 4 345 240 632,48				
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1	Lack of institutional capacity to manage and implement project [nDoE, pDoE, SACE]	Lack of adequate monitoring of contract IT staff quality and productivity Insufficient resources assigned to service DoE finds it difficult to take decisions, which delays service release, payment, commissioning work, etc. Lack of consensus in defining and adhering to the respective roles of the national and provincial departments of education Lack of financial and legal skills in DoE, and/or lack of involvement in day-to-day management of PPO Agreement from DoE perspective.	LoP	7	May receive poor quality of service without reporting such and thus unable to penalise contractor accordingly Reputational risk arising out of failures Either the project becomes mired in buresucratic wrangling and cannot move forward; or duplications continue leading to large-scale wastage and dissipating effect of investments Failure to issue termination notice	Department to set up contract monitoring unit Appropriate capacity to be build in the system Project should be owned by and driven by HEDCOM. This different from being approved by HEDCOM, as HEDCOM needs to take the lead in ensuring effective implementation and making it clear this is a HEDCOM priority. This needs ultimately to take place within HEDCOM as a whole, not just within the ICT sub-committee, as the latter does not involve all senior leadership. This will need to include plans to ensure continuity in current provincial initiatives, without allowing unnecessary duplication. Contractor to set up helpdesk Obligation on contractor to report to DoE poor performance	H	100%	H	50%	Both	R 30 201 751 966	R 4 530 262 797,85	Both	R 29 582 942 966	R 2 218 720 722,48	50%	50%	50%	50%
2	Multiple points of control and management	Initiative not controlled at single point, various parties involved	LoP	7	Objectives of initiative not met Increase cost of service delivery	Clearly defined governance and decision making structure with appropriate high-level support	H	50%	M	10%	Both	R 30 201 751 966	R 2 265 131 398,93	Both	R 29 582 942 966	R 295 829 429,66	100%		50%	50%
3	Integration risk Change management Service during transition could potentially slowdown or breakdown due to various transition specific factors.	Possibility that stakeholders and / other projects may not align to achieve a common goal Failure to deal with:- - Difficulty of staff dealing with the contractor. - Adapting to new equipment and new processes - Adapting to changes in staffing arrangements - Resistance to monitoring and other systems relating to the PPO agreement. Factors could be: - Poor staff morale due to uncertainty in the environment; - Delays in decision-making due to new structures, roles and responsibilities; and - New service areas and service definitions	LoP	7	Duplication of costs and / or wasteful expenditure Affect service availability Affect achievement of objectives	Involvement of all stakeholders at the earliest stages of the initiative Management and coordinating stakeholders Ensuring that educators are trained to avoid uncertainty and delays in service availability	H	50%	M	50%	Both	R 30 201 751 966	R 2 265 131 398,93	Both	R 29 582 942 966	R 1 479 147 146,32	100%		100%	
4	Lack of systemic integration	The project will fail if the investment in ICT infrastructure is not accompanied by significant systemic changes that see ICT being used to achieve greater efficiencies and/or to improve productivity. Key points of intersection to be managed include: 1. EMIS 2. Physical Planning 3. Financial management 4. HR management (incl IQMS) 5. Curriculum units in GET and FET	1 to 5	7	Cost of project will be layered on top o education system rather than integrated into mainstream budgets and creating savings elsewhere, with the result that cost of schooling in SA will increase with no discernible impac on quality	Ongoing involvement of all other directorates, combined with strong senior management support to drive through changes that will be required t leverage ICT investment effectively	H	50%	L	50%	Both	R 30 201 751 966	R 2 718 157 676,74	Both	R 29 582 942 966	R 177 497 657,80	100%		100%	
5	Ability to modify educator and administrator job description/ skill set	Initiative require a change in condition of service		4	Labour disputes Change in conditions of employment	Buy-in Legal due diligence - no change in conditions of employment	L	1%	L	1%	Opex	R 728 730 915	R 72 873,09	Opex	R 729 483 520	R 72 948,35	100%		100%	
6	Technological determinism	Due to complexity of educational objectives, focus during initiative design and implementation shifts to primary focus on ICT infrastructure and networking architectures and models	LoP	9	Significant investment in ICT has neutral or negative educational impact while financial resources are diverted from other potentially useful areas of spending	Robust, educationally driven initiative design process and strong management and monitoring mechanisms to evaluate impact of initiative against defined educational needs and objectives	M	50%	L	5%	Both	R 29 223 437 197	R 1 755 406 251,82	Both	R 28 620 723 542	R 14 310 361,77	100%		100%	
7	Devolving responsibility	Top-down approach in decision-making and responsibility for managing aspects of the initiative means the technology is not used at school level.	LoP	9	Significant investment in ICT has neutral or negative educational impact while financial resources are diverted from other potentially useful areas of spending	Project rollout should be driven throug creation of school technology plans at SGB level, with schools not participating until they have done effective planning. This will need to be accompanied by ongoing professional development of SGB members, who are likely to lack the skills to do this planning effectively. Technology plans should be integrated into general school plans	H	50%	M	20%	Opex	R 8 116 384 743	R 973 966 169,12	Opex	R 7 983 118 305	R 159 662 366,10	100%		100%	

Financial

							PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
													R 5 928 840 830.99			R 2 310 812 515.97				
Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Point that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	Likelihood of occurring [H, M, L] (during the term)	Impact of consequence of risk	Likelihood of occurring [H, M, L] (during the term)	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
1	Changes in Economic environment	Change in interest rates Change in exchange rates Change in inflation rates Change in VAT rate The changes in economic environment directly impact economics of the initiative, and although bidders will have primary responsibility for managing these, the ultimate impact will be on the DoE affecting Value for Money.	LoP	8	Adverse movement in economic conditions prior to and after financial close Cost of swap and/or hedging agreements Increase in cost of funding (floating rates as well as margins on fixed rates) Increase in initiative costs May adversely affect affordability of initiative Increased VAT payment obligation for DoE Diminution in real returns to the contractor over the initiative term	PPO - Swap agreements (fixed vs floating rates) - Hedging agreements - Limit exposure to forex elements - Contractor to maintain rea returns (link to CPIX + as well as benchmarking) PSC and pre-financial close - None	L	30%	L	30%	Both	R 27 925 951 267	R 85 777 865.86	Both	R 27 321 933 249	R 81 965 795.75	100%	0%	10%	90%
2	Reporting Requirements	Inaccurate recording/ accounting of initiative costs/ cash flows	LoP	8	Incorrect disclosure of costs incurred No financial consequence may however lead to breac of contract	Contractor required to provide audited financial statements Lender reporting requirements	L	0%	L	0%	Both	R 27 925 951 267	R 0.00	Both	R 27 321 933 249	R 0.00		100%		100%
3	Payment of Contractor Fee [nDoE and pDoE]	DoE fails to pay Contractor Fee timeously or does not pay	LoP	8	Interest on late payment DoE event of default May cause contractor to default under the financing and subcontractor agreements Negative impact on bankability of initiative	Budget locked in for period of contract Internal DoE process for payment PFMA requirements Clear timeframes for payment	L	1%	L	1%	Both	R 27 925 951 267	R 2 792 595.13	Both	R 27 321 933 249	R 2 732 193.32	100%		100%	
4	Contractor financial model error	Contractor's financial model contains error, other than incorrect cost estimate	1	7	Contract Fee does not adequately compensate contractor Shareholders need to increase equity	Due diligence of financial model by TA, Contractor, Lenders, Department, etc Obtain opinion from audits re financial model	L	0%	L	0%	Both	R 30 201 751 966	R 0.00	Both	R 29 582 942 966	R 0.00		100%		100%
5	Insolvency	Contractor or major subcontractor insolvent	LoP	7	Management failure in the contractor Contractor event of default May impact on BEE compliance	Contractor to form SPV to ring-fence initiative Annual financial reporting requirements Obtain contractor guarantees Due diligence on contractor and major subcontractors Lender due diligence	L	1%	L	1%	Both	R 30 201 751 966	R 3 020 175.20	Both	R 29 582 942 966	R 2 958 294.30		100%		100%
6	Financing unavailability	Funding for initiative can not be secured, either by - Contractor or - DoE	LoP	8	Delay in reaching financial close Negative impact on initiative from financial and non-financial perspective No funding to start or complete initiative May lead to contractor event of default	Bids to include documented lender commitment with minimum and easily achievable conditions Contractor guarantees Competitive and closely monitored funding arrangements	H	50%	M	50%	Both	R 27 925 951 267	R 2 094 446 345.54	Both	R 27 321 933 249	R 1 366 096 662.47	50%	50%	50%	50%
7	Cost of financing	The money spent on interest payment benefits neither the DoE nor bidder	1 to 5	7	Increased initiative costs which may impact on the affordability and value for money of the initiative	Market related interest charges Competitive lender process and negotiations Competitive and closely monitored funding arrangements	M	5%	M	5%	Both	R 30 201 751 966	R 151 008 759.53	Both	R 29 582 942 966	R 147 914 714.83	100%		50%	50%
8	Change in key stakeholders which results in weakening of financial standing	Change in shareholders of contractor or senior management of DoE with a different strategic direction	LoP	7	Reduced financial robustness of initiative Effect on subcontractors Effect on BEE compliance May lead to contractor event of default or default under the financing agreements	Access to financial records of contractor Consent required before change above 5% may take place Performance bonds to lenders Senior-level buy-in	L	5%	L	5%	Both	R 30 201 751 966	R 15 100 875.99	Both	R 29 582 942 966	R 14 791 471.48	100%		50%	50%

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Half life risk is expected to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
							Likelihood of consequence occurring (H, M, L) [during the term]	Impact in consequence of risk	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
9	Integration into overall budgets	The initiative will fail if all elements of DoE spending at national and provincial level are not reviewed and adjusted to incorporate the systemic expenditure (and corresponding savings elsewhere) needed to leverage the value of the infrastructure and networking investment	1 to 5	8	Initiative is unlikely to be sustainable as its operating costs will be additional to, rather than integrated into, current DoE budgets	Changes to rolling DoE 3-year budgets in all directorates at national and provincial levels will be required within 3 years	M	20%	M	20%	Both	R 27 925 951 287	R 868 849 023.74	Both	R 27 321 933 249	R 849 436 864.59	100%		100%	
10	Insurance	See below for detail		7			M	100%	M	5%	Both	R 30 201 751 988	R 1 [illegible]	Both	R 29 582 942 988	R 1 [illegible]	100%	0%	20%	80%
11																				
12	Insurance – non vitiation	Insurance policy excludes "non-vitiation" and claim repudiated[!]			Increase in insurance premium Increase risk of insurance not paying out	Not a requirement for this initiative and should not be a risk, include the DoE as a co insured under all insurance policies		0%		0%										
13	Insurance - failure	Contractor fails to take out all or any of the insurances			Losses not recoverable from insurance Compensation payment on termination by the Contractor may be higher	Take control of the process and make sure the contractor provides proof of cover, include the DoE as a co insured on the policy		10%		10%										
14	Insurance – no claim	Contractor bearing losses without compensation from insurance due to: - the amount of the claim being equal or less than the excess, or - due to the fear that a claim may cause an increase in premiums in the future			Impacts on the financial feasibility of the initiative	Make sure that the excess amounts are derived from the cost analysis as well as their impact on the cash flow of the contractor. Premium increases should be managed and costed for.		20%		20%										
15	Insurance – repudiation of claim	Contractor late in submitting claim, or claim repudiated by the Insurer			Impacts on the financial feasibility of the initiative	This should be part of the initiative management process and adequate guidelines should be put in place, the cover negotiated should be as wide as possible		20%		20%										
16	Insurance – under-insured	Minimum insurance requirement not sufficient or not kept in accordance with Good Industry Practice			Impacts on the financial feasibility of the initiative	This should be part of the initiative management process and adequate guidelines should be put in place, DoE should always be notified and or included in any changes etc.		10%		10%										
17	Insurance - lapse	Insurance allowed to lapse			Impacts on the financial feasibility of the initiative	This should be part of the initiative management process and adequate guidelines should be put in place, DoE should always be notified and or included in any changes etc.		10%		10%										
18	"Unaffordable" risks in terms of insurance	Risk generally not insured by market due to price or becomes "unaffordable". Level of compensation may be i dispute should PPO Agreement terminate			Impacts on the financial feasibility of the initiative	Do not foresee any uninsurable or economically non viable cover being required for this initiative, a for the level of compensation this should be included in the PPO i.e. a dispute resolution clause		10%		10%										
19	Uninsurable risk	Risk not traditionally available o becomes unavailable			Impacts on the financial feasibility of the initiative	Do not foresee any uninsurable or economically non viable cover being required for this initiative		10%		10%										
20	Insurance – premium increase	Unfavourable insurance pricing			Impacts on the financial feasibility of the initiative	Not in this initiative, however this must be managed by the appointed contractors broker and the DoE should insist on input		10%		10%										

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	PMP risk as applicable (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC		PPO		PSC		PPO	
							Likelihood of consequence occurring (H, M, L) [during the term]	Impact or consequence of risk	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
21	Insurance - solvency	Solvency risk of insurer			Impacts on the financial feasibility of the initiative	This should not be a problem as one can dictate the type of insurer and insurance paper required. Typically the insurance cover required for this initiative will be available from any of the local insurance companies.		5%		5%								
22	Insurance procured on a national level	Better pricing can be achieved, no case of incorrect or inadequate cover being procured			Impacts on the financial feasibility of the initiative	Procure by nDoE as part of PPO agreements		50%		50%								
23	Security	Impact on the pricing as well as renewal of insurance policies [also has legal and technical implications iro security of assets]			Impacts on the financial feasibility of the initiative	Make sure that security is in place and constantly reviewed		60%		60%								

Legal

												R 1 685 136 038			R 1 034 436 586				
						PSC		PPO (after mitigation)		PSC		PSC		PPO		PSC		PPO	
Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	Likelihood of consequence occurring (H, M, L) (during the term)	Impact of consequence of risk	Likelihood of consequence occurring (H, M, L) (during the term)	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
1	Change in Education Regulatory Environment (Discriminatory and non-discriminatory) Change in Law, adversely affecting the Contractor Change in Law, Positively affecting the Contractor	The possibility that DoE or the State passes policy that affects the only education sector, e.g. a policy that invites more users than anticipated of the facility Additional funding to rebuild, alter or re-equip may be required due to change of law The possibility that the changes that are implemented result in the Contractor making more profit	LoP	7	Increases costs to the initiative Affect affordability limits Contractor may suffer loss in revenue. Possible Amendment of the agreement Increases costs to the initiative Affect affordability limits Contractor may suffer loss in revenue or achieve excessive profits	Limit the risk to Unforeseeable Conduct Special compensation to be arranged Special provisions to be arranged in the event of the change in law	L	30%	L	30%	Both	R 30 201 751 966	Both	R 29 582 942 966	50%	20%	50%	20%
2	Contractor Events of Default: material breach	Breach of the agreement which is not a specific event of default or a performance/availability failure Breach of a material terms, including but not limited to: - abandonment of works - a breach of failing to provide service - unauthorized change of control - failure to maintain insurance - failure to make payment to DoE over certain amount - event of default under financing agreement - unilateral cancellation of agreement by DoE	LoP	8	Result in delays in the Initiative May have cost implications May result in the cancellation of the initiative Compensation event by DoE	Clear service specifications Reasonable time frames for the initiative Provisions for step-in rights	L	1%	L	1%	Both	R 27 925 951 267	Both	R 27 321 933 249		100%		100%
3	Force Majeure:	The occurrence of certain unexpected events that are beyond the control of the parties (whether natural or 'man-made') which may affect the installation and commencement of the Initiative e.g. war No smooth hand-over of services from Contractor	LoP	8	Result in completion delays Service not available Could result in termination	Define force majeure narrowly to exclude risk that can be insured Relief event	L	5%	L	5%	Both	R 27 925 951 267	Both	R 27 321 933 249	50%	50%	50%	50%
4	Consequential arrangements of termination [DoE and contractor] [also expiry]	No hand-over by contractor to New Contractor in the event of termination or expiry of the agreement	18 to 20	8	Delays Affect service availability Cost implications	Clear contract terms for hand-over Substitution of the Contractor with a New Contractor If termination is at the instance of DoE, then compensation	H	20%	H	5%	Both	R 27 925 951 267	Both	R 27 321 933 249	50%	50%	50%	50%
5	Confidential Information: Disclosure Contractor	Contractor discloses Confidential Information in contravention of agreement	LoP	9	Disputes Cost implications [Exam papers and results]	Clear terms in the PPO agreement	L	30%	L	30%	Opex	R 8 116 384 743	Opex	R 7 983 118 305	50%	50%		100%
6	Intellectual Property Rights: - initiative data not provided - Failure to transfer - Unlawful use - Breach of security - Jointly developed - Storage of initiative data - Failure to indemnify	Contractor does not provide initiative Data to DoE Curriculum and Content - copyright Unlawful use of software Contractor sell or copies its intellectual property that affects the security of the initiative Sharing in profits of jointly developed intellectual property (if applicable) Ownership disputes Exploitation rights Contractor fails to back-up and storage of initiative data Failure Contractor to indemnify against infringement	LoP	1	Disputes Delays in DoE meeting its obligations	Clear terms in PPO agreement Penalty regime Security iro unlawful use Internet site management	M	30%	M	30%	Opex	R 6 190 704 160	Opex	R 6 055 721 842	50%	50%		100%

Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer 'Input sheet' for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	PSC		PPO (after mitigation)		PSC		PSC	PPO	PSC		PPO	
							Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)	Risk value Excl timing and discount rate	Allocation of risk		Allocation of risk	
																DoE	Contractor	DoE	Contractor
7	Parties reach a deadlock on any aspect	Parties not reaching an agreement on any aspect, either regulated or not regulated by the agreement	LoP	9	Completion delays Affect availability of service Costs	Clear terms in PPO agreement Clear service specifications to avoid dispute Dispute resolution procedures, which may include, mediation, arbitration and litigation	M	10%	M	10%	Both	R 29 223 437 197	R 282 234 372	Both	R 28 620 723 542	R 286 207 235	50%	50%	50%	50%
8	School Governing Body (SGB) risk [include pDoE]	The possibility that the statutory role of SGBs may conflict with the contractor role and pDoE	LoP	1	Completion delays Affect availability of service Costs	Cooperative / enabling agreement with SGBs	L	5%	L	5%	Both	R 15 382 057 826	R 7 691 029	Both	R 14 749 809 847	R 7 374 905	100%		100%	
9	Procurement legislation [Regulatory and statutory risks] [prohibitive and future]	Procurement via statutory entity etc (approved service provider) Procurement of services could be limited to certain levels of Government, e.g. province	LoP	13	Lack of competence by DoE to procure Initiative not initiated	Possible change of legislation Multiplicity of service contracts by different pDoE Procurement via other statutory entity Mark-up of cost is included model	H	5%	H	5%	Both	R 28 654 682 202	R 214 910 117	Both	R 28 051 396 769	R 210 385 476	100%		100%	
10	Dispute Procedure – Negotiation Dispute Procedure - Mediation Dispute Procedure - Litigation Dispute Procedure - Expert arbitration Dispute Procedure - Interlocutory proceeding	Failure to reach agreement Failure to reach agreement with the determination of the mediator. Possibility of action and/or applications instituted at courts Expedited expert arbitration to resolve technical dispute under the PPO agreement. Urgent relief - interdict/mandamus/ declarator	LoP	7	Completion delays Affect availability of service Costs	Clear terms in PPO Agreement Clear service specifications to avoid dispute	L	5%	L	5%	Both	R 30 201 751 986	R 15 100 876	Both	R 29 582 942 966	R 14 791 471	50%	50%	60%	40%

BEE

							PSC		PPO (after mitigation)		PSC			PPO			PSC		PPO	
													R 748 119 992			R 732 690 523				
Risk no	Risk	Definition of risk	Applicable period of risk (between years 1 to 20)	Pillar that risk is applicable to (refer "input sheet" for details)	Consequence of risk before mitigation	Mitigation proposed in PPO	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Likelihood of consequence occurring (H, M, L) [during the term]	Impact of consequence of risk	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Base cost that risk will be applied to (capex, opex or both)		Risk value Excl timing and discount rate	Allocation of risk DoE	Allocation of risk Contractor	Allocation of risk DoE	Allocation of risk Contractor
1	Minimum equity in the contractor and key subcontractor	Changes in the shareholding in contractor affect the equity held in the Contractor, in respect of which there is an obligation to meet and maintain the minimum PDI/PDE shareholding in the contractor over the term Possible "fronting" by non-BEE shareholders and/or subcontractors	LoP	9	May lead to contractor termination if not remedied within specified time period May lead to penalties incurred by the contractor	Shareholders agreement and PPO Agreement provisions to maintain required BEE equity levels Require that there is no reduction in the PDE/PDI ownership, or same constitutes an Event of Default Department's consent required if change more than a specified %	L	5%	L	5%	Both	R 29 223 437 197	R 14 611 719	Both	R 28 620 723 542	R 14 310 362	100%			100%
2	Minimum participation goals stipulated (both SPV and key subcontractors)	Contractor not achieving the minimum participation goals	LoP	9	May lead to contractor termination if not remedied within specified time period May lead to penalties incurred by the contractor	PPO agreement provisions to maintain required BEE participation levels	M	5%	M	5%	Both	R 29 223 437 197	R 146 117 186	Both	R 28 620 723 542	R 143 103 618	100%			100%
3	Employment and training strategies for PDIs, Women and Disabled (both SPV and key subcontractors)	Employment and training of women and disabled persons does not take place	LoP	9	May lead to penalties incurred by the contractor	PPO agreement provisions to maintain required BEE levels	M	5%	M	5%	Both	R 29 223 437 197	R 146 117 186	Both	R 28 620 723 542	R 143 103 618	100%			100%
4	Employee Empowerment – compliance with legislation (both SPV and key subcontractors)	Not complying with the Employment Equity Act and/or Broad Based Economic Empowerment Act	LoP	9	Non compliance with Law	Possible intervention by the Department of Labour	L	1%	L	1%	Both	R 29 223 437 197	R 2 922 344	Both	R 28 620 723 542	R 2 862 072	100%			100%
5	Management participation by empowerment partners Active equity participation	How PDE/PDIs are to participate in the day to day management of the contractor and the subcontractors on an operational basis	LoP	9	May lead to penalties incurred by the contractor	PPO agreement provisions to maintain required BEE levels and clearly stipulates the required involvement	M	5%	M	5%	Both	R 29 223 437 197	R 146 117 186	Both	R 28 620 723 542	R 143 103 618	100%			100%
6	Capital and operating expenditure by key subcontractors to BEE and SMMEs	The extent to which cash flows must flow to BEE and SMMEs	LoP	9	May lead to penalties incurred by the contractor May lead to contractor termination if substantive	PPO agreement provisions to maintain required BEE levels Ensure included in financial model and key subcontractor agreements	M	10%	M	10%	Both	R 29 223 437 197	R 292 234 372	Both	R 28 620 723 542	R 286 207 235	100%			100%