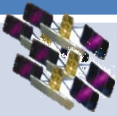
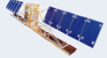


	Background	CAPEX and OPEX	What is the value?	Applications/Problems	Proposed improvement (e-GEOS)																																										
 COSMO-SkyMed-1, 2, 3, 4 X-band	Strategic Committee for Water Resources Management: Procurement of additional (third) RADAR satellite receiving station and image processing system (178 MTHB)	<table><tr><th>Year</th><th>Setup Cost MB</th><th>Quota Cost (MB)</th><th>MA Cost (MB)</th><th>Sum (MB)</th></tr><tr><td>2012</td><td>178⁽¹⁾</td><td>0</td><td>0</td><td>178</td></tr><tr><td>2013</td><td>0</td><td>12.087</td><td>0</td><td>12.087</td></tr><tr><td>2014</td><td>0</td><td>12.087</td><td>0</td><td>12.087</td></tr><tr><td>2015</td><td>0</td><td>12.087</td><td>5</td><td>17.087</td></tr><tr><td>2016</td><td>0</td><td>12.087</td><td>5</td><td>17.087</td></tr></table> ⁽¹⁾ After e-Auction	Year	Setup Cost MB	Quota Cost (MB)	MA Cost (MB)	Sum (MB)	2012	178 ⁽¹⁾	0	0	178	2013	0	12.087	0	12.087	2014	0	12.087	0	12.087	2015	0	12.087	5	17.087	2016	0	12.087	5	17.087	<table><tr><th>Yr</th><th>In Cash</th><th>In Kind⁽²⁾</th></tr><tr><td>2014</td><td>261,320</td><td>17,247,610</td></tr><tr><td>2015</td><td>0</td><td>9,942,481</td></tr><tr><td>2016 (Apr)</td><td>0</td><td>2,583,900</td></tr></table> ⁽²⁾ For disaster-related missions and solution services	Yr	In Cash	In Kind ⁽²⁾	2014	261,320	17,247,610	2015	0	9,942,481	2016 (Apr)	0	2,583,900	<u>Agencies / Organizations</u> - Department of National Parks, Wildlife and Plant Conservation: forest monitoring - Rice department: monitoring and yield estimation - Department of Marine and Coastal Resources: coastal monitoring - Mitr Phol Sugar Corp. Ltd: sugarcane cropping area monitoring - Department of Groundwater Resources: settlement study - King Mongkut's University of Technology North Bangkok: sugarcane cropping area monitoring - Oil spill monitoring: Rayong - Gulf of Thailand surveillance: upon request by Marine Department <u>Internal Use</u> - Flood monitoring - Marine pollution and maritime accidents - Rice monitoring (countrywide) - Rice yield estimation using SAR: Suphanburi province - Coastal radar applications for marine and land warnings <u>COSMO-SkyMed Limitations:</u> - Impair / misinterpretation during very cloudy sky - Imaging requests are frequently rejected causing lack of timely information.	- Elaboration of success cases/applications (including business model) that e-GEOS has been delivered to customers. - Demonstration/trial version/hand on of e-GEOS existing applications/platforms (such as TEMAS, eMAGE) in order to understand its potential. - Co-evaluation between GISTDA and e-GEOS on the result from e-GEOS existing applications/platforms, then adjustment until get the suitable application/platform for Thailand.
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2016 (Apr)	0	2,583,900																																													
 Radarsat-2 C-Band	Strategic Committee for Water Resources Management: RADAR image processing system improvement (69 MTHB)	<table><tr><th>Year</th><th>Setup Cost MB</th><th>Quota Cost (MB)</th><th>MA Cost (MB)</th><th>Sum (MB)</th></tr><tr><td>2012</td><td>69⁽¹⁾</td><td>16.5</td><td>0</td><td>85.5</td></tr><tr><td>2013</td><td>0</td><td>22</td><td>0</td><td>22</td></tr><tr><td>2014</td><td>0</td><td>22</td><td>0</td><td>22</td></tr><tr><td>2015</td><td>0</td><td>16.5</td><td>2.3</td><td>18.8</td></tr><tr><td>2016</td><td>0</td><td>16.5</td><td>2.3</td><td>18.8</td></tr></table> ⁽¹⁾ After e-Auction	Year	Setup Cost MB	Quota Cost (MB)	MA Cost (MB)	Sum (MB)	2012	69 ⁽¹⁾	16.5	0	85.5	2013	0	22	0	22	2014	0	22	0	22	2015	0	16.5	2.3	18.8	2016	0	16.5	2.3	18.8	<table><tr><th>Yr</th><th>In Cash</th><th>In Kind⁽²⁾</th></tr><tr><td>2014</td><td>1,896,724</td><td>27,785,000</td></tr><tr><td>2015</td><td>819,595</td><td>11,572,210</td></tr><tr><td>2016 (Apr)</td><td>117,100</td><td>10,326,400</td></tr></table>	Yr	In Cash	In Kind ⁽²⁾	2014	1,896,724	27,785,000	2015	819,595	11,572,210	2016 (Apr)	117,100	10,326,400	<u>Internal Use</u> - Flood monitoring - Marine pollution and maritime accidents - Rice monitoring (countrywide) - Rice yield estimation using SAR: Suphanburi province - Coastal radar applications for marine and land warnings <u>COSMO-SkyMed Limitations:</u> - Impair / misinterpretation during very cloudy sky - Imaging requests are frequently rejected causing lack of timely information.	Co-evaluation between GISTDA and e-GEOS on the result from e-GEOS existing applications/platforms, then adjustment until get the suitable application/platform for Thailand.
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 Landsat-8 Optical	GISTDA's 2556-2560 strategy: (1) Strengthen EO capability and (2) Enlarge partnerships on satellite technology development and EO data (22 MTHB)	<table><tr><th>Year</th><th>Setup Cost MB</th><th>Quota Cost (MB)</th><th>MA Cost (MB)</th><th>Sum (MB)</th></tr><tr><td>2015</td><td>22⁽¹⁾</td><td>5.889</td><td>0</td><td>27.889</td></tr><tr><td>2016</td><td>0</td><td>4,977</td><td>0</td><td>4,977</td></tr></table> ⁽¹⁾ After e-Auction	Year	Setup Cost MB	Quota Cost (MB)	MA Cost (MB)	Sum (MB)	2015	22 ⁽¹⁾	5.889	0	27.889	2016	0	4,977	0	4,977	<table><tr><th>Yr</th><th>In Cash</th><th>In Kind⁽²⁾</th></tr><tr><td>2014</td><td>0</td><td>0</td></tr><tr><td>2015</td><td>23,000</td><td>29,200</td></tr><tr><td>2016 (Apr)</td><td>2,675</td><td>6,750</td></tr></table>	Yr	In Cash	In Kind ⁽²⁾	2014	0	0	2015	23,000	29,200	2016 (Apr)	2,675	6,750	Land usage information for INDIA-ASEAN ARCHAEOLOGICAL ATLAS FROM SATELLITE DATA “Connectivity of Regional Culture : Finite Routes & Infinite Values” project	Coaching/Guidance from e-GEOS teams (marketing and all related/support teams) so that GISTDA can achieve the satisfaction goal (especially revenue target)															
Year	Setup Cost MB	Quota Cost (MB)	MA Cost (MB)	Sum (MB)																																											
2015	22 ⁽¹⁾	5.889	0	27.889																																											
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 Thaichote Optical	Thailand Earth Observation System Project (Thaichote) (120 MEUR)	<table><tr><th>Year</th><th>Setup Cost MB</th><th>Quota Cost (MB)</th><th>MA Cost (MB)</th><th>Sum (MB)</th></tr><tr><td>2016</td><td>0</td><td>0</td><td>8.24</td><td>8.24</td></tr></table>	Year	Setup Cost MB	Quota Cost (MB)	MA Cost (MB)	Sum (MB)	2016	0	0	8.24	8.24	<table><tr><th>Yr</th><th>In Cash</th><th>In Kind⁽²⁾</th></tr><tr><td>2013</td><td>5,724,004</td><td>59,554,114</td></tr><tr><td>2014</td><td>2,178,338</td><td>60,636,779</td></tr><tr><td>2015</td><td>1,271,319</td><td>30,112,626</td></tr></table>	Yr	In Cash	In Kind ⁽²⁾	2013	5,724,004	59,554,114	2014	2,178,338	60,636,779	2015	1,271,319	30,112,626	- Coastal area and land cover change study (2009-2015): Mrigadayavan Palace, Petchburi: cloudy images - INDIA-ASEAN ARCHAEOLOGICAL ATLAS FROM SATELLITE DATA “Connectivity of Regional Culture : Finite Routes & Infinite Values” project: problems with overlapping images	Lesson learnt and co-share responsibility all the activity in full business loops.																				
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