

2015-2020

Global Safe City: Industry, Technologies, & Market



Source: Emergeo

2 Volumes:

**Global Safe City: Industry, Technologies,
& Market – Volume 1**

**Global Safe City: Industry, Technologies,
& Market – Volume 2**

2015-2020

Global Safe City: Industry, Technologies, & Market Volume 1



Source: Emergeo

Homeland Security Research Corp.

Global Safe City: Industry, Technologies & Market

2015-2020

Volume 1

June 2015

Homeland Security Research Corp. (HSRC) is an international market and technology research firm specializing in the Homeland Security (HLS) & Public Safety (PS) Industry. HSRC provides premium market reports on present and emerging technologies and industry expertise, enabling global clients to gain time-critical insight into business opportunities. HSRC's clients include U.S. Congress, DHS, U.S. Army, U.S. Navy, NATO, DOD, DOT, GAO, and EU, among others; as well as HLS & PS government agencies in Japan, Korea, Taiwan, Israel, Canada, UK, Germany, Australia, Sweden, Finland, Singapore. With over 750 private sector clients (72% repeat customers), including major defense and security contractors, and Fortune 500 companies, HSRC earned the reputation as the industry's Gold Standard for HLS & PS market reports.

**Washington D.C. 20004, 601 Pennsylvania Ave., NW Suite 900,
Tel: 202-455-0966, info@hsrc.biz, www.homelandsecurityresearch.com**

Table of Contents

1	Executive Summary	21
1.1	Major Findings	21
1.2	Major Conclusions	28
1.3	Global Safe Cities Market – 2013-2014 Data 2015-2020 Forecast.....	33
1.3.1	Global Safe Cities Market by Technology & Service – 2013-2020	33
1.3.2	Safe Cities Market by Region & Countries – 2013-2020	34
2	Introduction.....	35
2.1	Urbanization Trends.....	35
2.2	Urban Terror	38
2.2.1	Introduction.....	38
2.2.2	Urban Terror Trends.....	40
2.2.3	Urban Terror Challenges	41
2.3	Safe City vs. Smart City	42
2.3.1	Smart Cities.....	42
2.3.2	Safe Cities	47
	INDUSTRY & MARKET ANALYSIS.....	50
3	Market Drivers.....	50
4	Market Inhibitors.....	52
5	Safe Cities: Business Opportunities & Challenges	53
6	Safe Cities Industry: SWOT Analysis	54
6.1	Strengths	54
6.2	Weaknesses	56
6.3	Opportunities	57
6.4	Threats.....	58
7	Safe Cities Industry: Competitive Analysis.....	59
8	Safe City Market Tiers	60
9	Safe City Defense Primes & Mega Corporations	61
10	Entry Strategies toward the Safe City Arena.....	62
10.1	Safe City Project Price Elasticity	63
10.2	Mergers and Acquisitions (M&A).....	64

GLOBAL MARKET	65
11 Global Safe City Market – 2015-2020	65
11.1 Global Safe City Market by Technology/Service – 2013-2014 Data & 2015-2020 Forecast.....	65
11.1.1 Technology/Service Markets	65
11.1.2 Market Dynamics.....	67
11.1.3 Technology/Service Market Shares.....	69
11.2 Global Safe City Market by Region/Country – 2013-2014 Data & 2015-2020 Forecast	71
11.2.1 National/Regional Markets	71
11.2.2 Market Dynamics.....	73
11.2.3 National/Regional Market Shares.....	73
 SAFE CITIES MARKET 2015-2020 – BY REGION BY COUNTRY.....	75
12 U.S. Safe City Market – 2015-2020.....	75
12.1 U.S. Safe City Market Background	75
12.1.1 Federal Funding	75
12.1.2 Urban Area Security (Federal) Initiative.....	75
12.1.3 Metropolitan Medical Response System	76
12.1.4 Assistance to Firefighters Program	76
12.1.5 The UASI Program	76
12.1.6 Safe City Interoperable Communication	80
12.1.7 Federal Safe City IED Detection Program.....	80
12.1.8 Federal Safe City Bomb Squad Robotic Enhancements	81
12.1.9 Local Fusion Centers.....	82
12.1.10 UASI Reimbursement Program	82
12.1.11 Chicago Safe City.....	83
12.1.12 Atlanta Safe City Project.....	85
12.2 U.S. Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	86
12.2.1 Market by Technology/Service	86
12.2.2 Market Dynamics.....	88
12.2.3 Technology/Service Market Shares.....	90
 13 Latin America Safe City Market – 2015-2020.....	92
13.1 Mexico Safe City Market Background	92
13.1.1 Urban Security.....	92
13.1.2 Security Policy	92
13.1.3 Countering Terrorism in Mexico	93
13.1.4 Crime in Mexico.....	94
13.1.5 Mexico - Police Forces	94
13.1.6 Mexico City - A Safe City.....	96
13.1.6.1 Mexico City Safe City Present Status	96
13.1.6.2 Mexico City Safe City Future Expansion.....	97

13.2	Brazil Safe City Market Background	98
13.2.1	Terrorism in Brazil	98
13.2.2	Brazil Law Enforcement Agencies	98
13.2.3	Crime in Brazil	99
13.2.4	Brazil - Police Forces.....	99
13.2.5	Brazil – Safe City Projects	100
13.3	Latin America Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	102
13.3.1	Market by Technology/Service	102
13.3.2	Market Dynamics.....	104
13.3.3	Technology/Service Market Shares.....	106
14	Europe Safe City Market – 2015-2020	108
14.1	UK Safe City Market Background	108
14.1.1	Urban Security.....	108
14.1.2	UK Security Policy	108
14.1.3	Countering Terrorism.....	109
14.1.4	Crime in the UK	111
14.1.5	UK - Police Forces	112
14.1.6	UK Safe City Projects	113
14.1.6.1	UK Safe City Projects: Introduction.....	113
14.1.6.2	Market Trends.....	113
14.1.6.3	London - A Safe City.....	114
14.1.6.4	Glasgow – A Safe City.....	114
14.2	Germany Safe City Market Background.....	115
14.2.1	External Security	115
14.2.2	Homeland Security & Public Safety	116
14.2.3	German Security Policy	116
14.2.4	Countering Terrorism.....	117
14.2.5	Crime in Germany	119
14.2.6	Germany - Police Forces	120
14.2.7	Germany Safe City Projects	121
14.2.8	Stuttgart Safe City	121
14.3	France Safe City Market Background	122
14.3.1	External Security	122
14.3.2	Homeland Security & Public Safety	122
14.3.3	Security Policy	122
14.3.4	Urban Terrorism	123
14.3.5	Crime in France.....	126
14.3.6	France - Police Forces	126
14.3.7	France Safe City Projects.....	127
14.4	Netherlands Safe City Market Background	128
14.4.1	External Security	128
14.4.2	Homeland Security & Public Safety	128
14.4.3	Security Policy	128
14.4.4	Countering Terrorism.....	129

14.4.5	Crime in Netherlands.....	131
14.4.6	Netherlands - Police Forces	132
14.4.7	Netherlands Safe City Projects.....	132
14.4.7.1	Rotterdam – A Safe city	132
14.5	Spain Safe City Market Background	133
14.5.1	External Security	133
14.5.2	Homeland Security & Public Safety	133
14.5.3	Security Policy	134
14.5.4	Countering Terrorism.....	134
14.5.5	Crime in Spain.....	136
14.5.6	Spain Safe City Projects.....	136
14.6	Italy Safe City Market Background.....	140
14.6.1	External Security	140
14.6.2	Homeland Security & Public Safety	140
14.6.3	Italy Security Systems Market	141
14.6.4	Security Policy	142
14.6.5	Countering Terrorism.....	142
14.6.6	Italy Safe City Projects	144
14.7	Russia Safe City Market	144
14.7.1	Countering Terrorism.....	144
14.7.2	Crime in Russia	148
14.7.3	Russia Safe City Projects	148
14.8	Europe Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	149
14.8.1	Market by Technology/Service	149
14.8.2	Market Dynamics.....	151
14.8.3	Technology/Service Market Shares.....	153
15	Saudi Arabia Safe City Market – 2015-2020.....	155
15.1	Saudi Arabia Safe City Market Background.....	155
15.1.1	Saudi Arabia - Police Forces	155
15.1.2	Saudi Arabia Internal Security Policy	156
15.1.3	Saudi Arabia Security Surveillance	156
15.1.4	Saudi Arabia Safe Cities.....	157
15.1.5	Saudi Arabia 34 Ongoing and Future Safe Cities Projects ..	160
15.1.6	The Hajj Safe City Strategy	160
15.2	Saudi Arabia Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	161
15.2.1	Market by Technology/Service	161
15.2.2	Market Dynamics.....	163
15.2.3	Technology/Service Market Shares.....	165
16	Bahrain, Kuwait, Qatar & UAE Safe City Market – 2015-2020	167
16.1	Bahrain	167
16.1.1	Background	167
16.1.2	Terror and Insurgency.....	168

16.1.3	Bahrain Defense Force (BDF)	169
16.1.4	Ongoing and Future Smart & Safe City Projects In Bahrain	170
16.2	Kuwait	171
16.2.1	Market Background	171
16.2.2	Public Security	172
16.2.3	Kuwait City Smart & Safe City Project	172
16.3	Qatar Safe City Market Background	173
16.3.1	Market Background	173
16.3.2	Ongoing and Future Safe & Smart Cities	174
16.4	UAE Safe City Market Background	174
16.4.1	Terror & Crime in UAE	174
16.4.1.1	Countering Terrorism	174
16.4.1.2	Crime in the UAE	175
16.4.2	Police Workforce	177
16.4.3	UAE Safe City Projects	178
16.4.4	Dubai – A Safe City	180
16.5	Bahrain, Kuwait, Qatar, UAE Safe City Market – 2013-2014 Data & 2015-2020 Forecast	181
16.5.1	Market by Technology/Service	181
16.5.2	Market Dynamics	183
16.5.3	Technology/Service Market Shares	185
17	ME (w/o Gulf States) Safe City Market – 2015-2020	187
17.1	Market background	187
17.2	ME Urbanization	187
17.3	Israel Safe City Market Background	189
17.3.1	Overview	189
17.3.2	Savyon Safe Community Project	189
17.3.3	Nazareth – A Safe City	190
17.3.4	Be'er Sheva – A Safe City	190
17.3.5	Ra'anana – A Safe City	190
17.3.6	Acre – A Safe City	191
17.3.7	The Israeli Safe City and Safe Municipalities National Smart Alert System	191
17.4	ME (w/o Gulf States) Safe City Market – 2013-2014 Data & 2015-2020 Forecast	194
17.4.1	Market by Technology/Service	194
17.4.2	Market Dynamics	196
17.4.3	Technology/Service Market Shares	198
18	India Safe City Market – 2015-2020	200
18.1	India Safe City Market Background	200
18.1.1	Countering Terrorism	200
18.1.2	Crime in India	202
18.1.2.1	Crime in New Delhi	202
18.1.2.2	Crime in Mumbai	202

18.1.2.3	Crime in Hyderabad.....	203
18.1.3	India Safe City Projects	203
18.1.4	Surat – A Safe City.....	204
18.2	India Safe City Market – 2013-2014 Data & 2015-2020	
Forecast.....		205
18.2.1	Market by Technology/Service	205
18.2.2	Market Dynamics.....	207
18.2.3	Technology/Service Market Shares.....	209
19	China Safe City Market – 2015-2020.....	211
19.1	China Safe City Market Background	211
19.1.1	China Public Security	211
19.1.2	China Urbanization Plan.....	212
19.1.3	China Security Industry	213
19.1.4	China Safe Cities Market.....	217
19.1.5	China 200 Largest Safe City Projects.....	219
19.1.6	China Safe City Market Drivers	221
19.1.7	China Safe City Market Inhibitors	221
19.2	China Safe City Market – 2013-2014 Data & 2015-2020	
Forecast.....		222
19.2.1	Market by Technology/Service	222
19.2.2	Market Dynamics.....	224
19.2.3	Technology/Service Market Shares.....	226
20	Asia-Pacific (w/o India & China) Safe City Market – 2015-2020	228
20.1	South Korea Safe City Market Background	228
20.1.1	External Security	228
20.1.2	Homeland Security & Public Safety	228
20.1.3	South Korea Security Strategy	229
20.1.4	Countering Terrorism.....	229
20.1.5	Crime in South Korea	230
20.1.6	South Korea - Police Forces.....	230
20.1.7	South Korea Safe City projects	231
20.2	Japan Safe City Market Background.....	233
20.2.1	External Security	233
20.2.2	Homeland Security & Public Safety	233
20.2.3	Security Policy	234
20.2.4	Terror in Japan	234
20.2.5	Crime in Japan	234
20.2.6	Japan Safe Cities: Natural Disasters Response.....	235
20.2.7	Tokyo - Police Forces.....	236
20.2.8	Japan Safe City Projects	236
20.3	Indonesia Safe City Market Background.....	237
20.3.1	Terror & Crime in Indonesia	237
20.3.1.1	Countering International Terrorism	237
20.3.1.2	Crime in Indonesia.....	240

20.3.2	Indonesia - Police Forces	241
20.3.3	Indonesia Safe City Projects	242
20.4	Australia Safe City Market Background	243
20.4.1	External Security	243
20.4.2	Homeland Security & Public Safety	243
20.4.3	Australia Security Policy	244
20.4.4	Countering Terrorism in Australia	245
20.4.5	Australia - Police Forces.....	246
20.4.6	Australia Safe City Projects	246
20.4.7	Melbourne - A Safe City	247
20.5	Asia-Pacific (w/o India & China) Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	248
20.5.1	Market by Technology/Service	248
20.5.2	Market Dynamics.....	250
20.5.3	Technology/Service Market Shares.....	252
21	R.O.W. Safe City Market – 2015-2020.....	254
21.1	ROW Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	254
21.1.1	Market by Technology/Service	254
21.1.2	Market Dynamics.....	256
21.1.3	Technology/Service Market Shares.....	258
	TECHNOLOGY/SERVICE MARKETS	260
22	Global Video Surveillance & Storage Safe City Market – 2015- 2020	260
22.1	Market Background.....	260
22.2	Global Video Surveillance & Storage Safe City Market – 2013- 2014 Data & 2015-2020 Forecast	260
22.2.1	Market by Country/Region.....	260
22.2.2	Market Dynamics.....	262
22.2.3	National/Regional Market Shares.....	263
23	Global Video Analytics Safe City Market – 2015-2020.....	265
23.1	Market Background.....	265
23.2	Global Video Analytics Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	265
23.2.1	Market by Country/Region.....	265
23.2.2	Market Dynamics.....	267
23.2.3	National/Regional Market Shares.....	268
24	Global Tracking Technologies Safe City Market – 2015-2020.....	269
24.1	Market Background.....	269
24.2	Global Tracking Technologies Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	269
24.2.1	Market by Country/Region.....	269

24.2.2	Market Dynamics.....	271
24.2.3	National/Regional Market Shares.....	272
25	Global PIAM Safe City Market – 2015-2020.....	274
25.1	Market Background.....	274
25.2	Global PIAM Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	275
25.2.1	Market by Country/Region.....	275
25.2.2	Market Dynamics.....	277
25.2.3	National/Regional Market Shares.....	278
26	Global Managed Security Services Safe City Market – 2015- 2020	279
26.1	Market Background.....	279
26.2	Global Managed Security Services Safe City Market – 2013- 2014 Data & 2015-2020 Forecast.....	281
26.2.1	Market by Country/Region.....	281
26.2.2	Market Dynamics.....	283
26.2.3	National/Regional Market Shares.....	284
27	Global PSIM Safe City Market – 2015-2020.....	286
27.1	Market Background.....	286
27.2	Global PSIM Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	287
27.2.1	Market by Country/Region.....	287
27.2.2	Market Dynamics.....	289
27.2.3	National/Regional Market Shares.....	290
28	Global Location Based Emergency Notification Safe City Market – 2015-2020.....	291
28.1	Market Background.....	291
28.2	Global Location Based Emergency Notification Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	291
28.2.1	Market by Country/Region.....	291
28.2.2	Market Dynamics.....	293
28.2.3	National/Regional Market Shares.....	294
29	Global Cyber Security Safe City Market – 2015-2020	296
29.1	Market Background.....	296
29.1.1	Scope	296
29.1.2	Leading Safe City Cyber Security Companies.....	296
29.2	Global Cyber Security Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	297
29.2.1	Market by Country/Region.....	297
29.2.2	Market Dynamics.....	299
29.2.3	National/Regional Market Shares.....	300

30	Global Public Safety Communications Safe City Market – 2015-2020	301
30.1	Market Background	301
30.2	Global Public Safety Communications Safe City Market – 2013-2014 Data & 2015-2020 Forecast	304
30.2.1	Market by Country/Region	304
30.2.2	Market Dynamics	306
30.2.3	National/Regional Market Shares	307
31	Global Command & Control Systems Safe City Market – 2015-2020	309
31.1	Market Background	309
31.2	Global Command & Control Systems Safe City Market – 2013-2014 Data & 2015-2020 Forecast	309
31.2.1	Market by Country/Region	309
31.2.2	Market Dynamics	311
31.2.3	National/Regional Market Shares	312
32	Global Emergency Traffic Management Safe City Market – 2015-2020	314
32.1	Market Background	314
32.2	Global Emergency Traffic Management Safe City Market – 2013-2014 Data & 2015-2020 Forecast	314
32.2.1	Market by Country/Region	314
32.2.2	Market Dynamics	316
32.2.3	National/Regional Market Shares	317
33	Global Public Event Security Safe City Market – 2015-2020	319
33.1	Market Background	319
33.2	Global Public Event Security Safe City Market – 2013-2014 Data & 2015-2020 Forecast	320
33.2.1	Market by Country/Region	320
33.2.2	Market Dynamics	322
33.2.3	National/Regional Market Shares	323
34	Global System Integration Safe City Market – 2015-2020	325
34.1	Market Background	325
34.2	Global System Integration Safe City Market – 2013-2014 Data & 2015-2020 Forecast	325
34.2.1	Market by Country/Region	325
34.2.2	Market Dynamics	327
34.2.3	National/Regional Market Shares	328
35	Global Consulting, Planning and Training Services Safe City Market – 2015-2020	329
35.1	Market Background	329
35.2	Global Consulting, Planning and Training Services Safe City Market – 2013-2014 Data & 2015-2020 Forecast	330

35.2.1	Market by Country/Region.....	330
35.2.2	Market Dynamics.....	332
35.2.3	National/Regional Market Shares.....	333
36	Global Other Technologies and Services Safe City Market – 2015-2020	335
36.1	Market Background.....	335
36.2	Global Other Technologies and Services Safe City Market – 2013-2014 Data & 2015-2020 Forecast.....	335
36.2.1	Market by Country/Region.....	335
36.2.2	Market Dynamics.....	337
36.2.3	National/Regional Market Shares.....	338
37	The Report Research Methodology	340
37.1	Safe City Report Structure	340
37.2	Assumptions	340
37.3	Research Methodology	341
37.4	Who Is This Report For?.....	342
38	Disclaimer and Copyright	343

List of Tables

Table 1 - Global Safe City Market [\$M] by Technology/Service – 2013-2020.....	33
Table 2 - Global Safe City Market [\$M] by Country/Region – 2013-2020	34
Table 3 - The Six Pillars of Smart City	43
Table 4 - Safe Cities Market: Business Opportunities.....	53
Table 5 - Global Safe City Market [\$M] by Technology/Service – 2013-2020.....	65
Table 6 - Global Safe City Market AGR [%] – 2014-2020	67
Table 7 - Global Safe City Technology/Service Market Shares [%] – 2013-2020.....	69
Table 8 - Global Safe City Market [\$M] by Country/Region – 2013-2020	71
Table 9 - Global Safe City Market AGR [%] by Country/Region – 2014-2020	73
Table 10 - National/Regional Safe City Market Shares [%] – 2013-2020.....	73
Table 11 - U.S. Priorities and Target Capabilities	79
Table 12 - UASI Grant Funding Process.....	83
Table 13 - U.S. Safe City Market [\$M] by Technology/Service – 2013-2020	86
Table 14 - U.S. Safe City Market AGR [%] – 2014-2020	88
Table 15 - U.S. Safe City Technology/Service Market Shares [%] – 2013-2020	90
Table 16 - Latin America Safe City Market [\$M] by Technology/Service – 2013-2020.....	102
Table 17 - Latin America Safe City Market AGR [%] – 2014-2020	104
Table 18 - Latin America Safe City Technology/Service Market Shares [%] – 2013-2020.....	106
Table 19 - Crime Statistics for Germany – 2011-2012	120
Table 20 - Crime Statistics in Spain – Jan-Sept 2013.....	136
Table 21 - Europe Safe City Market [\$M] by Technology/Service – 2013-2020	149
Table 22 - Europe Safe City Market AGR [%] – 2014-2020.....	151
Table 23 - Europe Safe City Technology/Service Market Shares [%] – 2013-2020.....	153
Table 24 - Saudi Arabia Safe City Market [\$M] by Technology/Service – 2013-2020.....	161
Table 25 - Saudi Arabia Safe City Market AGR [%] – 2014-2020	163
Table 26 - Saudi Arabia Safe City Technology/Service Market Shares [%] – 2013-2020.....	165
Table 27 - Bahrain, Kuwait, Qatar and UAE Safe City Market [\$M] by Technology/Service – 2013-2020	181
Table 28 - Bahrain, Kuwait, Qatar and UAE Safe City Market AGR [%] – 2014-2020.....	183
Table 29 - Bahrain, Kuwait, Qatar and UAE Safe City Technology/Service Market Shares [%] – 2013-2020	185
Table 30 - ME (w/o Gulf States) Safe City Market [\$M] by Technology/Service – 2013-2020.....	194
Table 31 - ME (w/o Gulf States) Safe City Market AGR [%] – 2014-2020	196
Table 32 - ME (w/o Gulf States) Safe City Technology/Service Market Shares [%] – 2013-2020	198

Table 33 - India Safe City Market [\$M] by Technology/Service – 2013-2020 ...	205
Table 34 - India Safe City Market AGR [%] – 2014-2020.....	207
Table 35 - India Safe City Technology/Service Market Shares [%] – 2013-2020	209
Table 36 - China’s Cities by 2025	212
Table 37 - China 200 Largest Safe City Projects	219
Table 38 - China Safe City Market [\$M] by Technology/Service – 2013-2020..	222
Table 39 - China Safe City Market AGR [%] – 2014-2020	224
Table 40 - China Safe City Technology/Service Market Shares [%] – 2013- 2020.....	226
Table 41 - Video Cameras Expansion Plan in South Korea - 2011	231
Table 42 - Asia-Pacific (w/o India & China) Safe City Market [\$M] by Technology/Service – 2013-2020	248
Table 43 - Asia-Pacific (w/o India & China) Safe City Market AGR [%] – 2014- 2020.....	250
Table 44 - Asia-Pacific (w/o India & China) Safe City Technology/Service Market Shares [%] – 2013-2020	252
Table 45 - R.O.W. Safe City Market [\$M] by Technology/Service – 2013-2020	254
Table 46 - R.O.W. Safe City Market AGR [%] – 2014-2020.....	256
Table 47 - R.O.W. Safe City Technology/Service Market Shares [%] – 2013- 2020.....	258
Table 48 - Global Video Surveillance & Storage Safe City Market [\$M] by Country/Region – 2013-2020.....	260
Table 49 - Global Video Surveillance & Storage Safe City Market AGR [%] by Country/Region – 2014-2020.....	262
Table 50 - National/Regional Video Surveillance & Storage Safe City Market Shares [%] – 2013-2020	263
Table 51 - Global Video Analytics Safe City Market [\$M] by Country/Region – 2013-2020.....	265
Table 52 - Global Video Analytics Safe City Market AGR [%] by Country/Region – 2014-2020.....	267
Table 53 - National/Regional Video Analytics Safe City Market Shares [%] – 2013-2020.....	268
Table 54 - Global Tracking Technologies Safe City Market [\$M] by Country/Region – 2013-2020.....	269
Table 55 - Global Tracking Technologies Safe City Market AGR [%] by Country/Region – 2014-2020.....	271
Table 56 - National/Regional Tracking Technologies Safe City Market Shares [%] – 2013-2020	272
Table 57 - Global PIAM Safe City Market [\$M] by Country/Region – 2013-2020	275
Table 58 - Global PIAM Safe City Market AGR [%] by Country/Region – 2014- 2020.....	277
Table 59 - National/Regional PIAM Safe City Market Shares [%] – 2013-2020	278
Table 60 - Global Managed Security Services Safe City Market [\$M] by Country/Region – 2013-2020.....	281

Table 61 - Global Managed Security Services Safe City Market AGR [%] by Country/Region – 2014-2020.....	283
Table 62 - National/Regional Managed Security Services Safe City Market Shares [%] – 2013-2020	284
Table 63 - Global PSIM Safe City Market [\$M] by Country/Region – 2013-2020.....	287
Table 64 - Global PSIM Safe City Market AGR [%] by Country/Region – 2014-2020.....	289
Table 65 - National/Regional PSIM Safe City Market Shares [%] – 2013-2020	290
Table 66 - Global Location Based Emergency Notification Safe City Market [\$M] by Country/Region – 2013-2020	291
Table 67 - Global Location Based Emergency Notification Safe City Market AGR [%] by Country/Region – 2014-2020	293
Table 68 - National/Regional Location Based Emergency Notification Safe City Market Shares [%] – 2013-2020	294
Table 69 - Global Cyber Security Safe City Market [\$M] by Country/Region – 2013-2020.....	297
Table 70 - Global Cyber Security Safe City Market AGR [%] by Country/Region – 2014-2020.....	299
Table 71 - National/Regional Cyber Security Safe City Market Shares [%] – 2013-2020.....	300
Table 72 - Global Public Safety Communications Safe City Market [\$M] by Country/Region – 2013-2020.....	304
Table 73 - Global Public Safety Communications Safe City Market AGR [%] by Country/Region – 2014-2020.....	306
Table 74 - National/Regional Public Safety Communications Safe City Market Shares [%] – 2013-2020	307
Table 75 - Global Command & Control Systems Safe City Market [\$M] by Country/Region – 2013-2020.....	309
Table 76 - Global Command & Control Systems Safe City Market AGR [%] by Country/Region – 2014-2020.....	311
Table 77 - National/Regional Command & Control Systems Safe City Market Shares [%] – 2013-2020	312
Table 78 - Global Emergency Traffic Management Safe City Market [\$M] by Country/Region – 2013-2020.....	314
Table 79 - Global Emergency Traffic Management Safe City Market AGR [%] by Country/Region – 2014-2020	316
Table 80 - National/Regional Emergency Traffic Management Safe City Market Shares [%] – 2013-2020	317
Table 81 - Global Public Event Security Safe City Market [\$M] by Country/Region – 2013-2020.....	320
Table 82 - Global Public Event Security Safe City Market AGR [%] by Country/Region – 2014-2020.....	322
Table 83 - National/Regional Public Event Security Safe City Market Shares [%] – 2013-2020	323

Table 84 - Global System Integration Safe City Market [\$M] by Country/Region – 2013-2020.....	325
Table 85 - Global System Integration Safe City Market AGR [%] by Country/Region – 2014-2020.....	327
Table 86 - National/Regional System Integration Safe City Market Shares [%] – 2013-2020.....	328
Table 87 - Global Consulting, Planning and Training Services Safe City Market [\$M] by Country/Region – 2013-2020	330
Table 88 - Global Consulting, Planning and Training Services Safe City Market AGR [%] by Country/Region – 2014-2020	332
Table 89 - National/Regional Consulting, Planning and Training Services Safe City Market Shares [%] – 2013-2020	333
Table 90 - Global Other Technologies and Services Safe City Market [\$M] by Country/Region – 2013-2020.....	335
Table 91 - Global Other Technologies and Services Safe City Market AGR [%] by Country/Region – 2014-2020	337
Table 92 - National/Regional Other Technologies and Services Safe City Market Shares [%] – 2013-2020	338

List of Figures

Figure 1 - Safe City ICT Flow.....	22
Figure 2 - Smart City Concept (China).....	24
Figure 3 - Safe City Disaster Recovery Functions.....	25
Figure 4 - Safe City Situation Awareness	27
Figure 5 - Safe city Emergency Information Warning System.....	30
Figure 6 - Safe City Architecture & Functions	31
Figure 7 - Global Safe Cities Market Vectors.....	32
Figure 8 - National Urbanization vs. GDP per Capita by Key Countries – 2000-2020.....	35
Figure 9 - Urbanized Population Across the Globe.....	36
Figure 10 - Urban Population [%] by Country	37
Figure 11 - Jihadist Terror Level	39
Figure 12 - Smart City Framework.....	44
Figure 13 - Smart City Platform by Individual Services	45
Figure 14 - A Typical Smart City Layout	46
Figure 15 - Safe City Functions.....	47
Figure 16 - Distribution of Safe Cities Points	48
Figure 17 - Safe City vs. Smart City.....	49
Figure 18 - Smart City vs. Safe City Overlapping Missions.....	49
Figure 19 - Safe Cities Security Systems Market Competitive Analysis.....	59
Figure 20 - Global Safe City Market [\$M] by Technology/Service – 2013-2020..	66
Figure 21 - Global Safe City Market AGR [%] – 2014-2020.....	68
Figure 22 - Global Safe City Technology/Service Market Shares [%] – 2013-2020.....	70
Figure 23 - Global Safe City Market [\$M] by Country/Region – 2013-2020	72
Figure 24 - National/Regional Safe City Market Shares [%] – 2013-2020	74
Figure 25 - Drive Time Urban Area Coverage – 4 Hour.....	82
Figure 26 - Part of Chicago's Camera Surveillance Network at Navy Pier - IBM	84
Figure 27 - U.S. Safe City Market [\$M] by Technology/Service – 2013-2020	87
Figure 28 - U.S. Safe City Market AGR [%] – 2014-2020	89
Figure 29 - U.S. Safe City Technology/Service Market Shares [%] – 2013-2020	91
Figure 30 - Latin America Safe City Market [\$M] by Technology/Service – 2013-2020.....	103
Figure 31 - Latin America Safe City Market AGR [%] – 2014-2020	105
Figure 32 - Latin America Safe City Technology/Service Market Shares [%] – 2013-2020.....	107
Figure 33 - Stuttgart Safe City Steering Committee	121
Figure 34 - Madrid PoC Location, Montera St and CISEM	137
Figure 35 - Madrid PoC Architecture.....	138
Figure 36 - Europe Safe City Market [\$M] by Technology/Service – 2013-2020	150
Figure 37 - Europe Safe City Market AGR [%] – 2014-2020.....	152
Figure 38 - Europe Safe City Technology/Service Market Shares [%] – 2013-2020.....	154

Figure 39 - Video Cameras Surveillance in Mecca	157
Figure 40 - Mecca Safe City Command & Control Hub.....	158
Figure 41 - Map of the Saudi Arabian Cities	159
Figure 42 - Saudi Arabia Safe City Market [\$M] by Technology/Service – 2013-2020.....	162
Figure 43 - Saudi Arabia Safe City Market AGR [%] – 2014-2020.....	164
Figure 44 - Saudi Arabia Safe City Technology/Service Market Shares [%] – 2013-2020.....	166
Figure 45 - Dubai Police Organization Chart	177
Figure 46 - UAE Cities and Towns.....	179
Figure 47 - Bahrain, Kuwait, Qatar and UAE Safe City Market [\$M] by Technology/Service – 2013-2020	182
Figure 48 - Bahrain, Kuwait, Qatar and UAE Safe City Market AGR [%] – 2014-2020.....	184
Figure 49 - Bahrain, Kuwait, Qatar and UAE Safe City Technology/Service Market Shares [%] – 2013-2020	186
Figure 50 - Urban Population [Millions] Increase in Arab Countries- 1970-2050	188
Figure 51 - The Israeli Smart Alert System Process	192
Figure 52 - The Israeli eVigilo Smart Alert System Architecture	193
Figure 53 - ME (w/o Gulf States) Safe City Market [\$M] by Technology/Service – 2013-2020.....	195
Figure 54 - ME (w/o Gulf States) Safe City Market AGR [%] – 2014-2020	197
Figure 55 - ME (w/o Gulf States) Safe City Technology/Service Market Shares [%] – 2013-2020	199
Figure 56 - India Safe City Market [\$M] by Technology/Service – 2013-2020 ..	206
Figure 57 - India Safe City Market AGR [%] – 2014-2020	208
Figure 58 - India Safe City Technology/Service Market Shares [%] – 2013-2020.....	210
Figure 59 - China Safe City Market [\$M] by Technology/Service – 2013-2020.	223
Figure 60 - China Safe City Market AGR [%] – 2014-2020.....	225
Figure 61 - China Safe City Technology/Service Market Shares [%] – 2013-2020.....	227
Figure 62 - Asia-Pacific (w/o India & China) Safe City Market [\$M] by Technology/Service – 2013-2020	249
Figure 63 - Asia-Pacific (w/o India & China) Safe City Market AGR [%] – 2014-2020.....	251
Figure 64 - Asia-Pacific (w/o India & China) Safe City Technology/Service Market Shares [%] – 2013-2020	253
Figure 65 - R.O.W. Safe City Market [\$M] by Technology/Service – 2013-2020	255
Figure 66 - R.O.W. Safe City Market AGR [%] – 2014-2020	257
Figure 67 - R.O.W. Safe City Technology/Service Market Shares [%] – 2013-2020.....	259
Figure 68 - Global Video Surveillance & Storage Safe City Market [\$M] by Country/Region – 2013-2020.....	261

Figure 69 - Global Video Surveillance & Storage Safe City Market AGR [%] – 2014-2020.....	262
Figure 70 - National/Regional Video Surveillance & Storage Safe City Market Shares [%] – 2013-2020	264
Figure 71 - Global Video Analytics Safe City Market [\$M] by Country/Region – 2013-2020.....	266
Figure 72 - Global Video Analytics Safe City Market AGR [%] – 2014-2020	267
Figure 73 - National/Regional Video Analytics Safe City Market Shares [%] – 2013-2020.....	268
Figure 74 - Global Tracking Technologies Safe City Market [\$M] by Country/Region – 2013-2020.....	270
Figure 75 - Global Tracking Technologies Safe City Market AGR [%] – 2014-2020.....	271
Figure 76 - National/Regional Tracking Technologies Safe City Market Shares [%] – 2013-2020	273
Figure 77 - Global PIAM Safe City Market [\$M] by Country/Region – 2013-2020.....	276
Figure 78 - Global PIAM Safe City Market AGR [%] – 2014-2020	277
Figure 79 - National/Regional PIAM Safe City Market Shares [%] – 2013-2020.....	278
Figure 80 - Global Managed Security Services Safe City Market [\$M] by Country/Region – 2013-2020.....	282
Figure 81 - Global Managed Security Services Safe City Market AGR [%] – 2014-2020.....	283
Figure 82 - National/Regional Managed Security Services Safe City Market Shares [%] – 2013-2020	285
Figure 83 - Global PSIM Safe City Market [\$M] by Country/Region – 2013-2020.....	288
Figure 84 - Global PSIM Safe City Market AGR [%] – 2014-2020	289
Figure 85 - National/Regional PSIM Safe City Market Shares [%] – 2013-2020.....	290
Figure 86 - Global Location Based Emergency Notification Safe City Market [\$M] by Country/Region – 2013-2020	292
Figure 87 - Global Location Based Emergency Notification Safe City Market AGR [%] – 2014-2020.....	293
Figure 88 - National/Regional Location Based Emergency Notification Safe City Market Shares [%] – 2013-2020	295
Figure 89 - Global Cyber Security Safe City Market [\$M] by Country/Region – 2013-2020.....	298
Figure 90 - Global Cyber Security Safe City Market AGR [%] – 2014-2020	299
Figure 91 - National/Regional Cyber Security Safe City Market Shares [%] – 2013-2020.....	300
Figure 92 - Global Public Safety Communications Safe City Market [\$M] by Country/Region – 2013-2020.....	305
Figure 93 - Global Public Safety Communications Safe City Market AGR [%] – 2014-2020.....	306

Figure 94 - National/Regional Public Safety Communications Safe City Market Shares [%] – 2013-2020	308
Figure 95 - Global Command & Control Systems Safe City Market [\$M] by Country/Region – 2013-2020.....	310
Figure 96 - Global Command & Control Systems Safe City Market AGR [%] – 2014-2020.....	311
Figure 97 - National/Regional Command & Control Systems Safe City Market Shares [%] – 2013-2020	313
Figure 98 - Global Emergency Traffic Management Safe City Market [\$M] by Country/Region – 2013-2020.....	315
Figure 99 - Global Emergency Traffic Management Safe City Market AGR [%] – 2014-2020.....	316
Figure 100 - National/Regional Emergency Traffic Management Safe City Market Shares [%] – 2013-2020	318
Figure 101 - Global Public Event Security Safe City Market [\$M] by Country/Region – 2013-2020.....	321
Figure 102 - Global Public Event Security Safe City Market AGR [%] – 2014-2020.....	322
Figure 103 - National/Regional Public Event Security Safe City Market Shares [%] – 2013-2020	324
Figure 104 - Global System Integration Safe City Market [\$M] by Country/Region – 2013-2020.....	326
Figure 105 - Global System Integration Safe City Market AGR [%] – 2014-2020.....	327
Figure 106 - National/Regional System Integration Safe City Market Shares [%] – 2013-2020	328
Figure 107 - Safe City Planning Process	329
Figure 108 - Global Consulting, Planning and Training Services Safe City Market [\$M] by Country/Region – 2013-2020	331
Figure 109 - Global Consulting, Planning and Training Services Safe City Market AGR [%] – 2014-2020.....	332
Figure 110 - National/Regional Consulting, Planning and Training Services Safe City Market Shares [%] – 2013-2020.....	334
Figure 111 - Global Other Technologies and Services Safe City Market [\$M] by Country/Region – 2013-2020.....	336
Figure 112 - Global Other Technologies and Services Safe City Market AGR [%] – 2014-2020	337
Figure 113 - National/Regional Other Technologies and Services Safe City Market Shares [%] – 2013-2020	339

2015-2020

Global Safe City: Industry, Technologies & Market Volume 2



Source: Emergeo

Global Safe City: Industry, Technologies & Market

2015-2020

Volume 2

June 2015

Homeland Security Research Corp. (HSRC) is an international market and technology research firm specializing in the Homeland Security (HLS) & Public Safety (PS) Industry. HSRC provides premium market reports on present and emerging technologies and industry expertise, enabling global clients to gain time-critical insight into business opportunities. HSRC's clients include U.S. Congress, DHS, U.S. Army, U.S. Navy, NATO, DOD, DOT, GAO, and EU, among others; as well as HLS & PS government agencies in Japan, Korea, Taiwan, Israel, Canada, UK, Germany, Australia, Sweden, Finland, Singapore. With over 750 private sector clients (72% repeat customers), including major defense and security contractors, and Fortune 500 companies. HSRC earned the reputation as the industry's Gold Standard for HLS & PS market reports.

**Washington D.C. 20004, 601 Pennsylvania Ave., NW Suite 900,
Tel: 202-455-0966, info@hsrc.biz, www.homelandsecurityresearch.com**

Table of Contents

PRESENT & PIPELINE TECHNOLOGIES	18
1 Safe City Physical Security Information Management (PSIM)	18
1.1 Introduction	18
1.2 PSIM Software Capabilities	19
1.3 PSIM Software Providers	22
2 Safe City Public-Safety Answering Point (PSAP)	23
2.1 Public-Safety Answering Point (PSAP) Systems Vendors	25
3 Safe City Sensor ICT Networks	26
3.1 Scope.....	26
3.2 Distributed Sensors Systems.....	27
3.3 Sensor and Data Fusion Algorithms	27
3.4 Safe City Wireless Sensor Networks.....	29
4 Safe City Software as a Service (SaaS)	31
5 Safe City Social Media Emergency Response	32
6 Safe City Planning	34
6.1 Safe City Geo-Design: Definition	34
6.2 Geo-Design Technologies	34
7 Safe City Geographic Information Systems (GIS)	35
8 Safe City Location Based Emergency Mass Notification Systems (EMNS).....	36
8.1 Introduction	36
8.2 Safe City Cell Broadcast Application.....	37
8.3 Cell Broadcast Technologies	38
9 Safe City SCADA Systems.....	40
10 Safe City, Managed Security Services (MSS).....	42
10.1 Managed Security Services	42
10.2 On-Site Safe City Consulting	44
10.3 Remote Safe City Management.....	44
10.4 Managed Security Monitoring	44
10.5 Safe City Managed Security Services Vendors	44
11 Safe City Communication	45
11.1 Introduction	45
11.2 Safe City Communication Requirements.....	46
11.3 Benefits of Private Networks over Public Networks	47
11.4 City-Wide Communication Interoperability	47
12 Safe City Video Surveillance Technologies	49
12.1 Introduction	49
12.2 Video Surveillance Evolution	50

12.2.1	Analog Video Surveillance.....	51
12.2.2	Second-Generation Analog Video Surveillance.....	52
12.2.3	Third-Generation Video Surveillance.....	53
12.2.4	Digital Video Surveillance.....	56
12.2.5	IP Surveillance Cameras.....	56
12.2.6	IP-Based Video Surveillance Systems.....	57
13	Safe City Video Analytics Technologies.....	60
13.1	Introduction.....	60
13.1.1	Video Analytics System Architecture.....	61
13.1.2	Intelligent Video Surveillance: Cloud Platforms.....	62
13.2	Safe City Video Analytics Based Suspect Behavioral Analysis.....	63
13.3	Video Surveillance as a Service (VSaaS).....	65
13.3.1	Video Surveillance as Service Solutions: 26 Vendors.....	66
13.4	Real Time Automatic Alerts Software.....	67
13.5	Image Segmentation Software.....	68
13.6	Item Tracking Video Analytics Software.....	69
13.7	Object Sorting and ID.....	70
13.8	Item Identification and Recognition.....	70
13.9	Multi-Camera Intelligent Video Surveillance Systems.....	70
13.10	Video Content Analysis.....	71
13.10.1	Automated Analysis of Video Surveillance Data.....	75
13.10.2	Item Detection.....	75
13.10.3	Background Subtraction: Gaussian Mixture Based Software.....	76
13.10.4	Background Subtraction.....	78
13.10.5	Item Detection Using a Single-image Software.....	78
13.10.6	Item Tracking Software.....	79
13.10.7	Kalman Filtering Techniques, Region Segmentation.....	79
13.10.8	Kalman Filters Application to Track Moving Items.....	80
13.10.9	Partially Observable Markov Decision Process, Intelligent Video Surveillance Systems.....	81
13.10.10	“Splitting” Items Algorithms.....	83
13.10.11	Dimension Based Items Classifiers.....	84
13.10.12	Shape Based Item Classifiers.....	84
13.10.13	Event Detection Methods.....	85
13.10.14	Vision-based Human Action Recognition.....	86
13.10.15	3D Derived Egomotion.....	87
13.10.16	Path Reconstruction Software.....	87
13.10.17	Video Cameras Spatial Gap Mitigation Software.....	88
13.10.18	Networked Cameras Tag and Track Software.....	89
13.10.19	Visual Intelligence Technologies.....	90
13.10.20	The Visual Intelligence Process.....	90
13.10.20.1	Visual Processing.....	90
13.10.20.2	Fusion Engine.....	91

13.10.20.3 Event Description.....	91
13.10.20.4 Reasoning.....	92
13.10.20.5 Reporting.....	92
13.11 Video Analytics Challenges	93
14 Standoff Video Analytics Based Biometrics	94
14.1 Introduction	94
14.1.1 Video Surveillance Based Behavioral Profiling.....	97
14.1.2 Video Analytics Based Biometric Face Recognition Identification vs. Verification	99
14.1.3 Video Based Biometric Recognition Technologies	100
14.2 Video Based Face Recognition.....	101
14.2.1 Remote Biometric Identification Technologies.....	102
14.2.2 Fused Intelligent Video Surveillance & Watch Lists.....	102
14.2.3 Crowd and Riot Surveillance	103
14.2.4 Wireless Video Analytics	104
14.2.5 Cloud Video Analytics.....	105
14.2.6 Online Video Analytics.....	106
14.2.7 Pulse Video Analytics.....	107
14.3 Smart Cameras.....	107
14.4 Smart Cameras Video Analytics vs. Centralized Video Analytics	110
15 Physical Identity and Access Management (PIAM)	112
15.1 Introduction	112
15.2 Physical Identity and Access Management Benefits.....	112
15.2.1 PIAM 78 Vendors	114
15.2.2 Video Surveillance and Intelligent Video Analysis	115
16 Safe City Natural Disasters Mitigation & Management	117
16.1 Background.....	117
16.2 Private Sector Involvement in Safe Cities Disasters	120
16.3 Emergency Management Training and Education	122
16.4 Safe City Emergency Medical Services (EMS)	124
16.5 Emergency Management Software.....	126
16.6 Market Drivers.....	126
16.7 Market Inhibitors	126
16.8 Flood Prediction Software.....	127
17 Safe City Public Events Security.....	129
17.1 Public Event security.....	129
17.1.1 Pre-Event Planning	129
17.1.2 During the Event.....	129
17.1.3 After the Event.....	129
17.2 Private Sector Public Events Security.....	129
17.3 Communication Interoperability.....	130
17.4 Perimeter Security	130

17.5	Public Events Infrastructure Security	131
17.6	Public Events Emergency Services	131
17.7	Public Events WMD and Hazmat Detection	131
17.8	Public Events Security Market: Business Opportunities & Challenges	133
17.9	Market Drivers.....	134
17.10	Market Inhibitors	134
18	Safe City Cloud Computing, Data Mining & Analytics	136
19	Safe City Command & Control systems	137
19.1	Safe City Command & Control Tasks	137
19.2	Safe City NICS Command & Control Infrastructure	138
20	Gunshot Identification & Location Systems	141
20.1	Introduction	141
20.2	Acoustic Gunshot Location Technologies	142
20.3	Optical Gunshot Location Technologies	143
20.4	Fused Optical and Acoustic Gunshot Detection.....	143
20.5	Detection of Gunshot Signature: Artificial Neural Networks	144
20.6	Gunshot Location Detection: System Architecture.....	144
21	Safe City Emergency Transportation Management Systems	146
21.1	Intelligent Transportation Systems (ITS).....	146
21.2	Intelligent Transport Technologies	147
21.3	Wireless Communications	147
21.4	Triangulation Methods	148
21.5	License Plate Recognition (LPR)	149
21.6	Inductive Loop Detection	149
21.7	Video Vehicle Detection.....	149
21.8	Smart Transportation Security: Bluetooth Detection	150
21.9	Emergency Vehicle Notification Systems.....	150
VENDORS		151
22	Major Vendors.....	151
22.1	3i-MIND.....	151
22.1.1	Company profile	151
22.1.2	Safe City and Smart City Products	151
22.1.3	Contact Information	151
22.2	3VR.....	152
22.2.1	Company Profile.....	152
22.2.2	Safe City & Smart City Products.....	152
22.2.3	Recent Safe City & Smart City Activities	152
22.2.4	Contact Information	154
22.3	3xLOGIC.....	154
22.3.1	Company Profile.....	154

22.3.2	Safe City and Smart City Products	154
22.3.3	Recent Safe City & Smart City Activities	155
22.3.4	Contact Information	155
22.4	ABB.....	156
22.4.1	Company Profile	156
22.4.2	Safe City & Smart City Products.....	156
22.4.3	Recent Safe City and Smart City Activities.....	157
22.4.4	Contact Information	157
22.5	Accenture.....	158
22.5.1	Company Profile	158
22.5.2	Recent Safe City & Smart City Activities	158
22.5.3	Contact Information	159
22.6	ACTi Corporation	159
22.6.1	Company Profile	159
22.6.2	Safe City and Smart City Products	159
22.6.3	Recent Safe City & Smart City Activities	160
22.6.4	Contact Information	160
22.7	ADT Security Services	160
22.7.1	Company Profile	160
22.7.2	Safe City and Smart City Products	161
22.7.3	Contact Information	161
22.8	Agent Video Intelligence	161
22.8.1	Company Profile	161
22.8.2	Safe City and Smart City Products	162
22.8.3	Recent Safe City and Smart City Activities	162
22.8.4	Contact Information	163
22.9	AGT international.....	163
22.9.1	Company Profile	163
22.9.2	Safe City and Smart City Products	165
22.9.3	Recent Safe City and Smart City Activities	166
22.9.4	Contact Information	167
22.10	Alcatel Lucent	168
22.10.1	Company Profile	168
22.10.2	Safe City and Smart City Products	171
22.10.3	Recent Safe City and Smart City Activities	172
22.10.4	Contact Information	173
22.11	ALPHAOPEN.....	174
22.11.1	Company Profile	174
22.11.2	Safe City and Smart City Products	174
22.11.3	Contact Information	175
22.12	Anixter.....	175
22.12.1	Company Profile	175
22.12.2	Safe City and Smart City Products	175
22.12.3	Recent Safe City and Smart City Activities	175
22.12.4	Contact Information	175

22.13 Aralia System.....	176
22.13.1 Company Profile.....	176
22.13.2 Safe City and Smart City Products.....	176
22.13.3 Contact Information.....	177
22.14 AT&T Inc.....	177
22.14.1 Company Profile.....	177
22.14.2 Safe City & Smart City Products.....	178
22.14.3 Recent Safe City & Smart City Activities.....	180
22.14.4 Contact Information.....	181
22.15 Augusta Systems.....	181
22.15.1 Safe City & Smart City Products.....	181
22.15.2 Recent Safe City & Smart City Activities.....	182
22.15.3 Contact Information.....	182
22.16 Avigilon Corporation.....	182
22.16.1 Company Profile.....	182
22.16.2 Safe City and Smart City Products.....	183
22.16.3 Recent Safe City and Smart City Activities.....	183
22.16.4 Contact Information.....	184
22.17 Axis.....	184
22.17.1 Company Profile.....	184
22.17.2 Safe City and Smart City Products.....	185
22.17.3 Recent Safe City and Smart City Activities.....	185
22.17.4 Contact Information.....	186
22.18 AxxonSoft.....	186
22.18.1 Company Profile.....	186
22.18.2 Safe City and Smart City Products.....	187
22.18.3 Recent Safe City and Smart City Activities.....	187
22.18.4 Contact Information.....	188
22.19 BAE Systems.....	188
22.19.1 Company Profile.....	188
22.19.2 Safe City and Smart City Products.....	188
22.19.3 Recent Safe City and Smart City Activities.....	189
22.19.4 Contact Information.....	189
22.20 Bosch Security Systems.....	190
22.20.1 Company Profile.....	190
22.20.2 Safe City and Smart City Products.....	190
22.20.3 Recent Safe City and Smart City Activities.....	191
22.20.4 Contact Information.....	192
22.21 BT.....	192
22.21.1 Company Profile.....	192
22.21.2 Safe City and Smart City Products.....	193
22.21.3 Recent Safe City and Smart City Activities.....	193
22.21.4 Contact Information.....	194
22.22 Camero.....	194
22.22.1 Company Profile.....	194

22.22.2	Safe City and Smart City Products	194
22.22.3	Recent Safe City and Smart City Activities	195
22.22.4	Contact Information	195
22.23	Cassidian	195
22.23.1	Company Profile	195
22.23.2	Safe City & Smart City Products.....	196
22.23.3	Recent Safe City & Smart City Activities	196
22.23.4	Contact Information	196
22.24	CelPlan	197
22.24.1	Company Profile	197
22.24.2	Safe City and Smart City Products	197
22.24.3	Recent Safe City and Smart City Activities	198
22.24.4	Contact Information	199
22.25	China Security & Surveillance, Inc.	199
22.25.1	Company Profile	199
22.25.2	Safe City and Smart City Products	199
22.25.3	Recent Safe City and Smart City Activities	200
22.25.4	Contact Information	201
22.26	Cisco	201
22.26.1	Company Profile	201
22.26.2	Safe City and Smart City Products	202
22.26.3	Recent Safe City and Smart City Activities	202
22.26.4	Contact Information	203
22.27	Citilog	204
22.27.1	Company Profile	204
22.27.2	Safe City and Smart City Products	204
22.27.3	Recent Safe City and Smart City Activities	205
22.27.4	Contact Information	205
22.28	Computer Network Limited (CNL)	205
22.28.1	Company Profile	205
22.28.2	Safe City & Smart City Products.....	206
22.28.3	Recent Safe City & Smart City Activities	206
22.28.4	Contact Information	207
22.29	Diebold.....	207
22.29.1	Company Profile	207
22.29.2	Safe City and Smart City Products	208
22.29.3	Recent Safe City and Smart City Activities	208
22.29.4	Contact Information	208
22.30	DVTel.....	209
22.30.1	Company Profile	209
22.30.2	Safe City and Smart City Products	209
22.30.3	Recent Safe City and Smart City Activities	209
22.30.4	Contact Information	210
22.31	Elsag Datamat	210
22.31.1	Company Profile	210

22.31.2	Safe City and Smart City Products	211
22.31.3	Recent Safe City and Smart City Activities	211
22.31.4	Contact Information	211
22.32	Emerson Electric.....	212
22.32.1	Company Profile	212
22.32.2	Safe City and Smart City Products	213
22.32.3	Recent Safe City and Smart City Activities	213
22.32.4	Contact Information	214
22.33	Ericsson	214
22.33.1	Company Profile	214
22.33.2	Safe City & Smart City Products.....	214
22.33.3	Recent Safe City & Smart City Activities	215
22.33.4	Contact Information	216
22.34	Firetide.....	216
22.34.1	Company Profile	216
22.34.2	Safe City and Smart City Products	217
22.34.3	Recent Safe City and Smart City Activities	218
22.34.4	Contact Information	219
22.35	G4S.....	219
22.35.1	Company Profile	219
22.35.2	Safe City and Smart City Products	219
22.35.3	Recent Safe City and Smart City Activities	219
22.35.4	Contact Information	220
22.36	General Electric	220
22.36.1	Company Profile	220
22.36.2	Safe City and Smart City Products	220
22.36.3	Recent Safe City and Smart City Activities	220
22.36.4	Contact Information	221
22.37	Hexagon AB.....	221
22.37.1	Company Profile	221
22.37.2	Safe City and Smart City Products	222
22.37.3	Recent Safe City and Smart City Activities	222
22.37.4	Contact Information	223
22.38	Honeywell	223
22.38.1	Company Profile	223
22.38.2	Safe City and Smart City Products	224
22.38.3	Recent Safe City and Smart City Activities	225
22.38.4	Contact Information	226
22.39	IBM	226
22.39.1	Company Profile	226
22.39.2	Safe City and Smart City Products	226
22.39.3	Recent Safe City and Smart City Activities	228
22.39.4	Contact Information	229
22.40	IndigoVision	229
22.40.1	Company Profile	229

22.40.2	Safe City and Smart City Products	230
22.40.3	Recent Safe City and Smart City Activities	230
22.40.4	Contact Information	230
22.41	Intel Security	231
22.41.1	Company Profile	231
22.41.2	Safe City & Smart City Products.....	231
22.41.3	Recent Safe City & Smart City Activities	232
22.41.4	Contact Information	233
22.42	IntuVision Inc	233
22.42.1	Company Profile	233
22.42.2	Safe City and Smart City Products	233
22.42.3	Contact Information	234
22.43	iOmniscient	234
22.43.1	Company Profile	234
22.43.2	Safe City and Smart City Products	234
22.43.3	Recent Safe City and Smart City Activities	236
22.43.4	Contact Information	238
22.44	IPConfigure.....	238
22.44.1	Company Profile	238
22.44.2	Safe City and Smart City Products	238
22.44.3	Recent Safe City and Smart City Activities	239
22.44.4	Contact Information	240
22.45	IPS Intelligent Video Analytics	241
22.45.1	Company Profile	241
22.45.2	Safe City and Smart City Products	241
22.45.3	Recent Safe City & Smart City Activities	241
22.45.4	Contact Information	242
22.46	ISS.....	243
22.46.1	Company Profile	243
22.46.2	Safe City and Smart City Products	243
22.46.3	Recent Safe City and Smart City Activities	244
22.47	Contact Information.....	244
22.48	MACROSCOP	245
22.48.1	Company Profile	245
22.48.2	Safe City and Smart City Products	245
22.48.3	Contact Information	245
22.49	MDS.....	245
22.49.1	Company Profile	245
22.49.2	Safe City and Smart City Products	246
22.49.3	Contact Information	246
22.50	Mer group	246
22.50.1	Company Profile	246
22.50.2	Safe City and Smart City Products	248
22.50.3	Recent Safe City and Smart City Activities	249
22.50.4	Contact Information	250

22.51	Milestone Systems A/S	251
22.51.1	Company Profile	251
22.51.2	Safe City and Smart City Products	251
22.51.3	Recent Safe City and Smart City Activities	251
22.51.4	Contact Information	252
22.52	Mirasys	252
22.52.1	Company Profile	252
22.52.2	Safe City and Smart City Products	252
22.52.3	Recent Safe City and Smart City Activities	252
22.52.4	Contact Information	253
22.53	National instruments	253
22.53.1	Company Profile	253
22.53.2	Safe City and Smart City Products	253
22.53.3	Recent Safe City and Smart City Activities	254
22.53.4	Contact Information	255
22.54	NICE Systems.....	255
22.54.1	Company Profile	255
22.54.2	Safe City and Smart City Products	255
22.54.3	Recent Safe City and Smart City Activities	256
22.54.4	Contact Information	258
22.55	Northrop Grumman Corporation	258
22.55.1	Company Profile	258
22.55.2	Safe City and Smart City Products	258
22.55.3	Recent Safe City and Smart City Activities	259
22.55.4	Contact Information	261
22.56	ObjectVideo	262
22.56.1	Company Profile	262
22.56.2	Safe City and Smart City Products	262
22.56.3	Recent Safe City and Smart City Activities	262
22.56.4	Contact Information	263
22.57	Orsus	264
22.57.1	Company Profile	264
22.57.2	Safe City and Smart City Products	264
22.57.3	Contact Information	264
22.58	Panasonic	265
22.58.1	Company Profile	265
22.58.2	Recent Safe City and Smart City Activities	265
22.58.3	Contact Information	266
22.59	Pelco.....	266
22.59.1	Company Profile	266
22.59.2	Safe City and Smart City Products	267
22.59.3	Contact Information	267
22.60	Pivot3.....	267
22.60.1	Safe City and Smart City Products	268
22.60.2	Recent Safe City and Smart City Activities	268

22.60.3	Contact Information	268
22.61	Proximex	269
22.61.1	Company Profile	269
22.61.2	Safe City and Smart City Products	269
22.61.3	Recent Safe City and Smart City Activities	269
22.61.4	Contact Information	269
22.62	Raytheon Company	270
22.62.1	Company Profile	270
22.62.2	Safe City and Smart City Products	270
22.62.3	Recent Safe City and Smart City Activities	270
22.62.4	Contact Information	271
22.63	Salient Stills	271
22.63.1	Company Profile	271
22.63.2	Safe City and Smart City Products	272
22.63.3	Recent Safe City and Smart City Activities	272
22.63.4	Contact Information	272
22.64	Samsung Techwin	273
22.64.1	Company Profile	273
22.64.2	Safe City and Smart City Products	273
22.64.3	Recent Safe City and Smart City Activities	274
22.64.4	Contact Information	275
22.65	Schneider Electric	275
22.65.1	Company Profile	275
22.65.2	Safe City and Smart City Products	275
22.65.3	Recent Safe City and Smart City Activities	276
22.65.4	Contact Information	277
22.66	SeeTec	278
22.66.1	Company Profile	278
22.66.2	Safe City and Smart City Products	278
22.66.3	Recent Safe City and Smart City Activities	278
22.66.4	Contact Information	278
22.67	Siemens	279
22.67.1	Company Profile	279
22.67.2	Safe City and Smart City Products	280
22.67.3	Recent Safe City and Smart City Activities	280
22.67.4	Contact Information	282
22.68	Smart China (Holdings) Limited	282
22.68.1	Recent Safe City and Smart City Activities	282
22.69	Sony Corp.	283
22.69.1	Company Profile	283
22.69.2	Safe City and Smart City Products	283
22.69.3	Recent Safe City and Smart City Activities	283
22.69.4	Contact Information	284
22.70	Synectics Plc	284
22.70.1	Company Profile	284

22.70.2	Safe City and Smart City Products	284
22.70.3	Recent Safe City and Smart City Activities	286
22.70.4	Contact Information	286
22.71	Tandu Technologies & Security Systems Ltd	286
22.71.1	Company profile	286
22.71.2	Recent Safe City and Smart City Activities	286
22.71.3	Contact Information	286
22.71.4	Company Profile	287
22.71.5	Safe City and Smart City Products	287
22.71.6	Contact Information	289
22.72	Thales Group	290
22.72.1	Company Profile	290
22.72.2	Safe City and Smart City Products	290
22.72.3	Recent Safe City and Smart City Activities	292
22.72.4	Contact Information	292
22.73	Total Recall	293
22.73.1	Company Profile	293
22.73.2	Safe City and Smart City Products	294
22.73.3	Recent Safe City and Smart City Activities	294
22.73.4	Contact Information	294
22.74	Unisys	295
22.74.1	Company Profile	295
22.74.2	Safe City and Smart City Products	296
22.74.3	Contact Information	297
22.75	Verint	297
22.75.1	Company Profile	297
22.75.2	Safe City and Smart City Products	297
22.75.3	Recent Safe City and Smart City Activities	298
22.75.4	Contact Information	299
22.76	Vialogy LLC	299
22.76.1	Company Profile	299
22.76.2	Safe City & Smart City Products	300
22.76.3	Recent Safe City & Smart City Activities	300
22.76.4	Contact Information	300
22.77	Vigilant Technology	301
22.77.1	Company Profile	301
22.77.2	Safe City and Smart City Products	301
22.77.3	Recent Safe City and Smart City Activities	302
22.77.4	Contact Information	303
22.78	Zhejiang Dahua Technology	303
22.78.1	Company Profile	303
22.78.2	Safe City and Smart City Products	303
22.78.3	Contact Information	304

23	The Report Research Methodology	305
23.1	Safe City Report Structure	305
23.2	Assumptions	305
23.3	Research Methodology	306
23.4	Who Is This Report For?	307
24	Disclaimer and Copyright	308

List of Tables

Table 1 - Object Discrimination: Categories.....	28
Table 2 - Safe City Video Analytics, Functions and Description	61
Table 3 - Example: Disaster Vulnerability Analysis	124
Table 4 - Typical Goals of an EMS System: Daily vs. Disaster	124
Table 5 - Safe City Public Events Security Market: Business Opportunities	133

List of Figures

Figure 1 - A Typical Process for Collecting, Disseminating, and Utilizing Suspicious Activity Reports.....	24
Figure 2 - A Safe City Sensor Network ICT Systems.....	26
Figure 3 - Comparison of Wireless Sensor Networks in Terms of Transmission Distances & Data Rates	30
Figure 4 - Social Media and Emergency Response	33
Figure 5 - Safe City Geographic Information System (GIS) Layers of Data	35
Figure 6 - Safe City Mass Notification System.....	37
Figure 7 - Safe City SCADA.....	40
Figure 8 - Safe City Broadband System Layout.....	48
Figure 9 - Video Surveillance Evolution	50
Figure 10 - Analog Video Surveillance System.....	51
Figure 11 - Traditional vs. IP-Based Video Surveillance Systems	59
Figure 12 - Architecture of a Safe City Video Understanding System	64
Figure 13 - Video Content Analysis Block Diagram and Data Flow	73
Figure 14 - Classification Process Scheme	85
Figure 15 - Visual Intelligence Process.....	90
Figure 16 - Profiling and Behavior Tracking – Principles of Operation.....	94
Figure 17 - Standoff Biometric People Screening Using Biometric Intelligent Video Surveillance	98
Figure 18 - Field of View of a Fused Video Surveillance and Biometrics	103
Figure 19 - Police Application of Intelligent Video Surveillance	105
Figure 20 - Cloud Based Video Analytics Architecture.....	106
Figure 21 - Block Diagram of a Video Surveillance System with Smart Cameras	109
Figure 22 - Video Surveillance and Intelligent Video Analysis Applications.....	116
Figure 23 - 2000-2010 Number of Natural Disasters by Countries	117
Figure 24 - Number of Natural Disasters Reported by Year, by Cause - 1910-2010.....	118
Figure 25 - Private & Public Sectors Natural Disasters Awareness Flowchart	119
Figure 26 - 10 Largest Megacities and their Exposure to Natural Disasters	120
Figure 27 - Business Benefits during Various Stages of Disaster Response....	121
Figure 28 - Private Sector Business Involvement in Safe Cities Disasters	122
Figure 29 - Safe City Flood Prediction Map Generation.....	128
Figure 30 - Safe City Cloud Computing Architecture	136
Figure 31 - Safe City Command & Control Process.....	138
Figure 32 - Safe City Intelligent Traffic Management Detection and Tracking.....	146