

## Appendix E Implementation Risk

#	RISK DESCRIPTION	LIKELIHOOD (L M H)	IMPACT (L M H)	MITIGATION ACTIONS	WHO
1	ESO's failure to adopt new standard including terminology and symbology, ie organisations not prepared to alter current practices	M	H	<ul style="list-style-type: none"> <li>○ Federal support required to influence stakeholders to change practices</li> <li>○ Funding to support planning and undertaking transition</li> <li>○ Promote leadership by peak bodies</li> <li>○ Present as risk management initiative</li> <li>○ Legislate on use of symbology</li> <li>○ Publicise all agency approach</li> <li>○ Introduce in state exercises</li> </ul>	<p>Attorney General's Office (Federal Government)</p> <p>AFAC; ACSES</p> <p>NCTC; AEMC; SEMC</p>
2	Members, especially volunteers in the field, resistant to change and won't take up training and adoption of symbology	M to H	H	<ul style="list-style-type: none"> <li>○ Provide detailed briefings at all levels to raise awareness on impact to organisation and reasons for adopting.</li> <li>○ Develop mix of training methods, including self-paced methods, e.g., CDs and web-based learning, as well as formal training.</li> <li>○ Use new symbols in training and exercises</li> </ul>	<p>EMA (Commonwealth) and SEMC (State)</p>
3	Given that IT is often seen as not mainstream to business to many ESO's, implementation may be seen as niche and given low organisational priority	H	H	<ul style="list-style-type: none"> <li>○ Federal support required to influence stakeholders to change practices</li> <li>○ Funding to support planning and undertaking transition</li> <li>○ Promote leadership by peak bodies</li> <li>○ Present as risk management initiative</li> <li>○ Legislate on use of symbology</li> <li>○ Publicise all agency approach</li> <li>○ Introduce in state exercises</li> </ul>	<p>Attorney General's Office (Federal Govt)</p> <p>AFAC; ACSES</p> <p>NCTC; AEMC; SEMC</p>
4	Failure to get acceptance of common terminology. Implementation will impact organisation's procedures, map products and training and potentially state EM procedures.	M	M	<ul style="list-style-type: none"> <li>○ Promote benefits for organisation in the day-to-day operations</li> <li>○ Support organisations to match existing terminology to standard and publish for awareness raising.</li> <li>○ Funding grants to support and promote change</li> </ul>	<p>Federal, state, local governments</p> <p>Lifeline organisations</p>

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5	Cost of implementation of standard limits or hinders adoption. Cost of training, software and systems, and logistics of implementation. Especially costs to regional and volunteer organisations	H	H	<ul style="list-style-type: none"> <li>Funding grants to support and promote change</li> <li>Ensure there is no licence cost to access symbols</li> <li>Ensure that standards are freely and readily available</li> </ul>	ICSM Federal and state government
6	New standard not wholly adopted. Risk of employment of multiple standards and approaches, or incomplete adoption of standard across agencies.	M to H	H	<ul style="list-style-type: none"> <li>Work with Peak Bodies to enforce total adoption – training.</li> <li>Adopt staged roll-out focussed on defined set of EM agencies eg. wildfire; then SES etc</li> <li>Assign custodianship for specific symbol sets to EM agency</li> </ul>	ANZLIC ICSM AEMC ACSES
7	Symbols become out of date or new symbols are needed. Lack of ongoing maintenance/control.	M	M	<ul style="list-style-type: none"> <li>Establish custodianship for new symbols/ features to EM agency</li> <li>Implement web-based mechanism for users to readily post requests for updates or additions</li> <li>Establish online mechanism to notify users of changes and to receive updates.</li> <li>Ensure ongoing support is adequately funded.</li> <li>Implement overarching governance structure to monitor requests and responsiveness.</li> </ul>	ANZLIC ICSM Custodians
8	New symbols not easily interpreted or understood. Symbol may be seen as too complex; too simplified; unfamiliar; maps overloaded.	M	H	<ul style="list-style-type: none"> <li>Aim to minimise the number of symbols</li> <li>Design symbols to be readily understood and not dependent on high resolution for interpretation.</li> <li>Ensure symbols are supported by clear definitions and examples of use, and guidelines for application</li> <li>Cater for use of symbols at different scales and media including black&amp;white</li> <li>Ensure appropriate change management through training and awareness</li> </ul>	ICSM Custodians
9	Standard symbols not adopted or supported by technology vendors	M	M	<ul style="list-style-type: none"> <li>Ensure that compliance for inclusion of symbols is mandated in tenders/ contracts</li> <li>Make symbol set style libraries available to vendors</li> <li>Promote broad adoption by ESOs and highlight to vendors.</li> <li>Support adoption with political push for obligation for implementation</li> <li>Ensure that symbols are publicly available and not dependent on vendors</li> </ul>	ICSM ANZLIC  NCT/AEMC State governments  EMA/NCTC

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10	Symbology does not meet business requirements of specific EM sectors. For example, perceived low level of relevance to urban environments eg. structure fire	M	H	<ul style="list-style-type: none"> <li>Undertake staged rollout with objectives to support specific EM sectors.</li> <li>Implement feedback process and testing by sector before implementation.</li> </ul>	Initially Spatial Vision ICSM Custodians
11	Symbology sets not compatible with all GIS/mapping software. Inability of existing/developing technology to integrate new symbol sets and, therefore, to change existing symbols	H	M	<ul style="list-style-type: none"> <li>Thorough research of existing symbology and technology platforms.</li> <li>Test across platforms prior to implementation</li> <li>Technical limitations of major GIS products incorporated in the design process</li> <li>Establish feedback process to ICSM, including registry of issues</li> </ul>	Initially Spatial Vision ICSM
12	ISO accreditation of the FGDC symbols (now ANSI)	M	M	<ul style="list-style-type: none"> <li>Where practical, align with FGDC</li> <li>Consult with FGDC</li> </ul>	ICSM
13	Implementation too slow so that FGDC symbols becomes default standard by some organisations. U.S. Software products for EM promote U.S. symbols	L	L	<ul style="list-style-type: none"> <li>Keep EM community aware of timelines and stages of project</li> <li>Aim to make available initial symbol set as soon as practical</li> </ul>	ICSM
19	Standard is considered too hard or difficult to implement especially for agencies with small GIS capacity	M	H	<ul style="list-style-type: none"> <li>Support organisations to match existing terminology to standard and publish for awareness raising.</li> <li>Funding grants to support and promote change</li> </ul>	ICSM Federal and state government
20	Difficulty in accessing symbology	L/M	H	<ul style="list-style-type: none"> <li>Establish online mechanism to notify users of changes and to receive updates.</li> <li>Promote awareness of symbols and where to access them. For example, include advertisements in state EM map books, through industry media and forums.</li> </ul>	ICSM Peak bodies SEMC
21	Clarity of symbols impaired when combined over different backgrounds such as imagery; topographic mapping. Or clash in symbol formats used eg. Refuge Areas	M	M	<ul style="list-style-type: none"> <li>Design symbols to work across imagery and topographic backgrounds using masks</li> <li>Ensure symbols are supported by clear definitions and examples of use, and guidelines for application</li> <li>Test across platforms prior to implementation</li> <li>Establish feedback process to ICSM, including registry of issues</li> <li>Where relevant, aim to align standards with topographic symbol standards</li> <li>Promote standard symbols to organisations creating EM map book products</li> </ul>	ICSM

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22	Standard is too loosely defined and results in ambiguity and undermining the purpose of the project	L	H	<ul style="list-style-type: none"> <li>Standard developed in a rigid framework that allows/recognises that on-demand customisation of symbols may be required</li> </ul>	Spatial Vision ICSM

## Appendix F: Glossary of Abbreviations

Term	Definition
AARFA	Australian Association of Rural Fire Authorities
ACSES	Australian Council of State and Territory Emergency Services
AEMD	Australian Energy Market Commission
AFAC	Australian Fire Control Authorities
AHSWG	All-Hazards Symbols Working Group
AIIMS	Australian Inter-service Incident Management System
ALIES	Australian Libraries In Emergency Services
ANZLIC	The Spatial Information Council
EM	Emergency Management
EMA	Emergency Management Australia
EMSINA	Emergency Management Spatial Information Network Australia
FGDC	Federal Geographic Data Committee
GISSOP	GIS Standard Operating Procedures on Incidents Projects
ICS	Incident Control (or Command) System
IMS	Incident Management System
INSARAG	International Search and Rescue Advisory Group
NCTC	National Counter-Terrorism Committee
NIIMS	North American National Inter-agency Incident Management System
NIMAG	National Information Management Advisory Group
NSINS	National Spatial Information for National Security
NSW BCC	New South Wales Bushfire Coordinating Committee
SEMC	State Emergency Management Committee