

# ISO/IEC/IEEE 21840:2019-12 (E)

## Systems and software engineering - Guidelines for the utilization of ISO/IEC /IEEE 15288 in the context of system of systems (SoS)

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative References .....</b>	<b>1</b>
<b>3</b>	<b>Terms, definitions, and abbreviated terms .....</b>	<b>1</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>3.2</b>	<b>Abbreviated terms .....</b>	<b>3</b>
<b>4</b>	<b>Relationship to other standards .....</b>	<b>3</b>
<b>5</b>	<b>Key concepts and application .....</b>	<b>4</b>
<b>5.1</b>	<b>Differences between systems and SoS .....</b>	<b>4</b>
<b>5.2</b>	<b>Managerial and operational independence .....</b>	<b>7</b>
<b>6</b>	<b>Application of system life cycle processes to SoS .....</b>	<b>10</b>
<b>6.1</b>	<b>Agreement processes .....</b>	<b>10</b>
<b>6.1.1</b>	<b>General .....</b>	<b>10</b>
<b>6.1.2</b>	<b>Acquisition process .....</b>	<b>12</b>
<b>6.1.3</b>	<b>Supply process .....</b>	<b>13</b>
<b>6.2</b>	<b>Organizational project-enabling processes .....</b>	<b>15</b>
<b>6.2.1</b>	<b>General .....</b>	<b>15</b>
<b>6.2.2</b>	<b>Life cycle model management process .....</b>	<b>16</b>
<b>6.2.3</b>	<b>Infrastructure management process .....</b>	<b>17</b>
<b>6.2.4</b>	<b>Portfolio management process .....</b>	<b>18</b>
<b>6.2.5</b>	<b>Human resource management process .....</b>	<b>20</b>
<b>6.2.6</b>	<b>Quality management process .....</b>	<b>21</b>
<b>6.2.7</b>	<b>Knowledge management process .....</b>	<b>22</b>
<b>6.3</b>	<b>Technical management processes .....</b>	<b>23</b>
<b>6.3.1</b>	<b>General .....</b>	<b>23</b>
<b>6.3.2</b>	<b>Project planning process .....</b>	<b>24</b>
<b>6.3.3</b>	<b>Project assessment and control process .....</b>	<b>25</b>
<b>6.3.4</b>	<b>Decision management process .....</b>	<b>27</b>
<b>6.3.5</b>	<b>Risk management process .....</b>	<b>28</b>
<b>6.3.6</b>	<b>Configuration management process .....</b>	<b>29</b>
<b>6.3.7</b>	<b>Information management process .....</b>	<b>30</b>
<b>6.3.8</b>	<b>Measurement process .....</b>	<b>31</b>
<b>6.3.9</b>	<b>Quality assurance process .....</b>	<b>32</b>
<b>6.4</b>	<b>Technical processes .....</b>	<b>33</b>
<b>6.4.1</b>	<b>General .....</b>	<b>33</b>
<b>6.4.2</b>	<b>Business or mission analysis process .....</b>	<b>36</b>
<b>6.4.3</b>	<b>Stakeholder needs and requirements definition process .....</b>	<b>37</b>
<b>6.4.4</b>	<b>System requirements definition process .....</b>	<b>39</b>
<b>6.4.5</b>	<b>Architecture definition process .....</b>	<b>41</b>
<b>6.4.6</b>	<b>Design definition process .....</b>	<b>44</b>
<b>6.4.7</b>	<b>System analysis process .....</b>	<b>46</b>
<b>6.4.8</b>	<b>Implementation process .....</b>	<b>47</b>
<b>6.4.9</b>	<b>Integration process .....</b>	<b>48</b>

6.4.10	Verification process .....	49
6.4.11	Transition process .....	51
6.4.12	Validation process .....	52
6.4.13	Operation process .....	54
6.4.14	Maintenance process .....	55
6.4.15	Disposal process .....	56
Bibliography .....		58
IEEE notices and abstract .....		59