



VICE CHAIRMAN OF THE JOINT CHIEFS OF STAFF
WASHINGTON, DC 20318-9999

JROCM 068-19
03 July 2019

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Operations in the Information Environment DOTmLPP-P Change Recommendation

1. The Joint Requirements Oversight Council (JROC) reviewed and endorses the Operations in the Information Environment (OIE) DOTmLPP-P Change Recommendation (DCR). The JROC approves the enclosed actions and designates the Joint Staff J-39 as the lead organization for their implementation.
2. OIE are those activities that generate, apply, and alter information to change or maintain the perceptions, attitudes, and other elements that drive behaviors of relevant actors and the course of events. This DCR identifies OIE capability gaps and recommends integrated approaches that: enable the department to maintain its understanding of how information impacts the operational environment; leverage information to affect behavior; protect the observations, perceptions, and attitudes of the Joint Force and its partners; support human and automated decision making; and enhance combat power. The JROC notes that gaining and maintaining information advantage is a key element of the National Defense strategy.
3. The JROC requests that the Office of the Secretary of Defense, the Services, and the Combatant Commands implement actions as outlined in the attachment. The JROC also requests that the JS J39 provide an OIE DCR semiannual update to the Force Application Working Group and an annual update to the Force Application Functional Capabilities Board.

A handwritten signature in black ink, appearing to read "Paul J. Selva", is positioned above the typed name.

PAUL J. SELVA
General, U.S. Air Force
Chairman, Joint Requirements Oversight Council

Attachment:

Operations in the Information Environment DOTmLPP-P Change Recommendation Actions

DISTRIBUTION:

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DEPARTMENT OF DEFENSE CHIEF INFORMATION OFFICER

ATTACHMENT
Operations in the Information Environment
DOTmLPPF-P Change Recommendation (DCR) Actions

DOTmLPPF-P Category and OPR	Action	Suspense Date
<p>DOTmLPPF-P Category: Doctrine</p> <p>OPR: JS J39 and J25</p> <p>Supporting: USSOCOM and Services</p>	<p>1. (U) Develop Tactics, Techniques, and Procedures (TTPs) or Handbook to guide the Joint Force (JF) in understanding the informational, physical, and human aspects of the SE and in leveraging information and the informational aspects of other military and USG activities to achieve enduring strategic outcomes. Key elements include:</p> <p style="padding-left: 20px;">a. (U) Characterizing the informational, physical, and human aspects of the SE</p> <ul style="list-style-type: none"> • Process and decision criteria for designating relevant actors (see glossary definition) • Process to identify aspects of influence pathways (e.g., human networks and the strength of relationships based on cultural, social, economic, locations and other factors) • Analytical framework(s) that captures the interplay of the informational, physical, and human aspects of the SE and can guide determination of information needs for planning (e.g., Political, Military, Economic, Social, Information, and Infrastructure; Measuring Progress in Conflict Environments; Interagency Conflict Assessment Framework; Area Structures Capabilities Organizations People and Events, Criticality, Accessibility, Recuperability, Vulnerability, Effect, and Recognizability; Issues, Groups, Interests, Vulnerabilities). Framework(s) should address: <ul style="list-style-type: none"> ○ Observable signatures and appropriate gathering/collection mechanisms for physical communications infrastructure and other relevant natural and manmade characteristics of the environment that affect the IE ○ Relevant actor identities and components of their profile, including demographic composition, form, function, logic, bias, worldview, methods of operations to include use of technology ○ Informational power capabilities and capacities to assist in understanding relevant actors • Processes for collecting relevant actor and informational related data, exploiting, and processing this data, and 	<p>JROCM + 18 Months</p>

populating the analytic frameworks above

b. (U) Assessing the informational, physical, and human aspects of the SE

- Process to determine "key terrain," the control of which provides an information advantage (i.e., relevant actors, their use of information/data, information delivery means/pathways, and other informational, physical, and human elements
- Process to develop a baseline understanding of the IE and subsequently modify the model of relevant actor perceptions, attitudes, and other elements that drive behaviors
- Process to project potential future activities in the IE that will impact the SE

c. (U) Planning and Executing OIE

- Guidance for developing Measures of Effectiveness (MOEs) that reliably reflect changes in the perceptions, attitudes, and other drivers of behavior and subsequent effects in the SE.
 - Tiered Indicators of MOEs tied to desired behaviors
 - Definitions for differences and linkages between short-term tactical measures and longer-term operational/strategic measures
- A listing of current set of policy, legal, and ethical guidelines to effectively advise commanders how to best leverage information to influence relevant actors
- Informational coordination processes, deconfliction processes, and fire and maneuver control measures (preferably tied to existing operational terms and graphics) to enable integration, synchronization, and deconfliction of informational aspects of military activities during plan development and operations. Control measures should also account for activities of interorganizational partners and the impacts of authorities, permissions, and subsequent rules of behavior

d. (U) Conducting Evaluations of OIE: Process to conduct information/behavioral change combat assessments to facilitate rapid recognition, adaptation, and iterative analysis of activities in the IE. This should include pre-event evaluation.

<p>DOTmLPF-P Category: Doctrine</p> <p>OPR: JS J3/J39</p> <p>Supporting: National Defense University (NDU) (United States Army War College)</p>	<p>4. (U) After JP 5-0 update (Recommendation #3, JCOIE Transition Plan) revise the Campaign Planner's Handbook to incorporate:</p> <ul style="list-style-type: none"> • A template for joint planning, understanding, and integrating physical and informational activities • Information regarding the JF and interorganizational partners capabilities to integrate physical and informational activities and the requirements and timelines for incorporating these capabilities into JF operations • Examples of baseline course of action (COA) evaluation criteria based upon desired behavioral changes to use during campaign planning 	<p>JROCM + 24 Months</p>
<p>DOTmLPF-P Category: Doctrine</p> <p>OPR: JS J2 and J39</p> <p>Supporting: DIA</p>	<p>5. (U) Review and, as appropriate, recommend revisions to the JP 2 Intelligence series to highlight how the intelligence function is applied to the IE. Incorporate:</p> <ul style="list-style-type: none"> • TTPs for assessing and understanding integrated physical and informational activities • Requirements to understand the informational, physical, and human environmental elements that support or degrade relevant actor's will or ability to act, defend, or resist • Integrate the psychological operations target audience analysis process into Joint Intelligence Preparation of the Environment • Specify requirement to analyze constraints and restraints presented by host nation laws • Incorporate consideration of artificial intelligence (AI) and other emerging technologies • A common OIE lexicon • Other relevant aspects of the OIE TTPs/Handbooks (Recommendation #1) 	<p>IAW JS J7 JDPC (1Q 22)</p>
<p>DOTmLPF-P Category: Doctrine</p> <p>OPR: JS J39</p> <p>Supporting: JS J23 and J25, CCMDs, Services and USSOCOM</p>	<p>8. (U) Develop and test ways and means to manage integrated physical and informational activities with the current targeting processes and tools. Include assessments informational coordination processes, deconfliction processes, and "fire and maneuver" control measures. Subsequently review and, as appropriate, revise JP 3-60, <i>Joint Targeting</i>, and JP 3-09, <i>Joint Fire Support</i>.</p>	<p>IAW JS J7 JDPC (1Q 22)</p>
<p>DOTmLPF-P Category: Doctrine</p>	<p>11. (U) Develop and test processes and mechanisms for evaluating artificial intelligence (AI), machine learning, and other enhancers of computational power to identify criteria which characterizes AI adversarial relevant actors.</p> <ul style="list-style-type: none"> • Developing and testing AI/ML evaluation criteria. 	<p>JROCM + 24 Months</p>

<p>OPR: Joint Artificial Intelligence Center (JAIC)</p> <p>Supporting: Services and USSOCOM</p>	<ul style="list-style-type: none"> • Identify potentially exploitable vulnerabilities and resiliencies. • Subsequently document these processes in a TTP/handbook. 	
<p>DOTmLPF-P Category: Organization</p> <p>OPR: OUSD (P)</p> <p>Supporting: JS J1, J3, J7, CCMDs, Services, and FA FCB</p>	<p>12. (U) OSD in coordination with Joint Staff will sponsor a FFRDC study to improve DoD organization to more effectively support Combatant Commands' (CCMDs) and the Joint Force's employment of OIE. Identify and as appropriate recommend refinements to the roles and responsibilities of the Designated Senior Official (DSO)/ Under Secretary of Defense for Policy (USDP), Principal Cyber Advisor (PCA), Under Secretary of Defense for Intelligence (USDI), Under Secretary of Defense for Acquisition and Support (USD (A&S)), and Assistant to Secretary of Defense for Public Affairs (ATSD/PA) to support the effective integration of OIE. Provide study recommendations to the Deputy Secretary of Defense.</p>	<p>JROCM + 18 Months</p>
<p>DOTmLPF-P Category: Organization</p> <p>OPR: OUSD (P)</p> <p>Supporting: JS J39</p>	<p>13. (U) Recommend that DepSecDef designate an organization(s) to identify and develop capabilities to support OIE and to deliver these capabilities to DoD components and interagency partners through rapid research and development, advanced studies and technical innovation, and provision of support to U.S. military operations (e.g., Combating Terrorism Technology Support Office).</p>	<p>JROCM + 18 Months</p>
<p>DOTmLPF-P Category: Organization</p> <p>OPR: DJS and JS J3</p> <p>Supporting: JS J1, J3, J7, CCMDs, Services, and FA FCB</p>	<p>14. (U) Joint Staff in coordination with OSD will sponsor a FFRDC study to evaluate and as necessary consolidate OIE organizations and activities under a single organization to develop capabilities, synchronize, and integrate OIE across all domains. Examine Joint and Service staffs and unit structures to determine organizational functions and force structure needed to conduct and coordinate analysis, planning, and execution of integrated physical and informational power for various types of operations. Determine the optimal organizational construct and manpower requirements. Potential options include:</p> <ul style="list-style-type: none"> • Functional Combatant Command (CCMD) focused on information, sub-unified commands (e.g. Theater Special Operations Command), optimal Service component constructs, and augmented staff sections on the JS and CCMD staffs 	<p>JROCM + 18 Months</p>

	<ul style="list-style-type: none"> • Consider potential integration of Red (or Alternative Thinking Cells) into JF staffs to inform COA identification and selection • Consider Dedicated Red/Green Teams on the Joint Staff and CCMD staffs to consider competitor and other relevant actor populations • Consider an analytical effort leveraging technology to understand friendly force vulnerabilities to adversary actions in the IE; apply this analysis to mitigate friendly vulnerabilities. • Consider placement and relationships of PA with other IRC related staff functions 	
<p>DOTmLPPF-P Category: Organization</p> <p>OPR: USSOCOM and Services</p> <p>Supporting: JS J39 and CCMDs</p>	<p>15. (U) Incorporate ideas for integrating physical and informational power concepts into Title X (and other Service-designated) wargames to determine optimal Service organizational constructs and capacity to sufficiently evaluate Joint Force ability to plan and execute OIE.</p>	<p>JROCM + 36 Months</p>
<p>DOTmLPPF-P Category: Training</p> <p>OPR: CCMDs and Combat Support Agencies</p> <p>Supporting: JS J2, J3, J5, J7, and Services</p>	<p>18. (U) After UJTL update (Recommendation #17 JCOIE Transition Plan), review, revise or develop new METs and associated JMETLs / AMETLs to incorporate requirements for analyzing and understanding the IE, and how to deliberately leverage information and the informational aspects of military activities in planning, and executing OIE; reflected in training and readiness reporting.</p>	<p>JROCM + 24 Months</p>
<p>DOTmLPPF-P Category: Training</p> <p>OPR: USSOCOM and Services</p> <p>Supporting: JS J2, J3/J39, and J5</p>	<p>19. (U) In consideration of occupational specialty, position, and seniority; identify, develop, and provide appropriate initial, sustainment, and pre-deployment training for the Joint Force to identify, evaluate, anticipate and influence the behavior of relevant actors. This includes a characterization of the area of responsibility (AOR) which incorporates specific aspects of the IE.</p>	<p>JROCM + 24 Months</p>

<p>DOTmLPF-P Category: Training</p> <p>OPR: JS J7 and USSOCOM</p> <p>Supporting: JS J39 and Services</p>	<p>20. (U) Assess training venues (e.g. combat training centers, the IO Range, Joint Staff training events, Persistent Cyber Training Environment, etc.) and methodologies and determine required actions (and costs) to update them and ensure adequate representation of the IE to practice and evaluate the ability to integrate physical and informational power:</p> <ul style="list-style-type: none"> • Review and refine guidance to ensure joint training venues in all four tiers of the Joint Exercise Program highlight operational art and design (and its use in optimizing the integration and application of physical and informational power to enable enduring outcomes) • Revise joint exercise guidance to include objectives for assessing and organizational constructs for a variety of operations • Review and revise exercise design to incorporate the challenges of OIE: the temporal aspects of OIE, the broad scope of relevant actors, the complexity and dynamic nature of the IE across the competition and conflict continuum, and the impact of inconsistent authorities and rules of engagement • After Mission Essential Task List (METL) development, expand Training Center capabilities to enable exercises that incorporate the nuances of OIE (previous bullet) 	<p>JROCM + 24 Months</p>
<p>DOTmLPF-P Category: Training</p> <p>OPR: DIA, JS J2, J39, and USSOCOM</p> <p>Supporting: OUSD (I) and Services</p>	<p>21. (U) In accordance with revised Joint/Service doctrine and new TTPs/handbooks, identify knowledge, skills, and abilities (KSAs) linked to revised JMETs required for intelligence analysts, other occupational specialties occupying analyst billets, and IRC specialists to understand, assess, and characterize the IE at relevant operational echelons.</p>	<p>JROCM + 36 Months</p>
<p>DOTmLPF-P Category: Training</p> <p>OPR: DIA, CCMDs/ and JRITC</p> <p>Supporting: OUSD (I) and Services</p>	<p>22. (U) Develop and provide JS J7-approved intelligence analysis training curricula to ensure CCMD-level and below military and civilian all-source analysts are proficient in the application of the Joint Intelligence Preparation of the Environment (JIPOE) process in order to produce intelligence estimates and assessments that convey an holistic appreciation of the OE, to include an approach that characterizes the information environment by describing the interplay informational, human, and physical aspects of the IE and a commander's OE.</p> <p>Proficiency shall be measured through JIPOE-derived, all-source finished intelligence that is adequate to inform Design, the Joint</p>	<p>JROCM + 48 Months</p>

	<p>Planning Process, and the development of options that blend informational and physical power via lethal and non-lethal actions ultimately aimed at affecting the behavior of relevant actors within the OE. Specific items include but are not limited to:</p> <ul style="list-style-type: none"> • (U) Analysis of the landscape of competing and reinforcing narratives, identification of prevailing themes in an OE, and synthesis and integration of this understanding into the planning, conduct, and assessment of operations/campaigns • (U) Anticipatory/predictive analysis of relevant actor decision-making and behavior • (U) Inculcate best practices on how to: <ul style="list-style-type: none"> ○ (U) Develop and maintain dynamic intelligence that draws on continuously assessed and updated estimates and understanding of the informational, human, and physical aspects of the IE ○ (U) Conduct environmental assessments that account for relevant actors, informational, human, and physical aspects and subsequently incorporate those assessments into the operational planning process ○ (U) Perform intelligence assessments on relevant actors ○ (U) Conduct analysis and develop understanding of socio-cultural factors, relationships and the range of other elements that shape human behavior as part of the intelligence process; expand the pool of relevant actors beyond those of armed forces and political factions ○ (U) Understand the existing organizations that conduct analysis of relevant actors and means/methods of requesting information ○ (U) Address KSAs (Recommendation #20) for understanding and characterizing the IE 	
<p>DOTmLPF-P Category: Training OPR: JS J-7/Joint Targeting School</p>	<p>23. (U) Review and, as appropriate, revise KSAs for occupational specialties that support targeting that were established/revised in response to new/revised doctrine and new/revised METs and, as appropriate, revise training requirements and curricula to achieve learning objectives for:</p> <ul style="list-style-type: none"> • Understanding how to weaponize integrated physical and informational activities to achieve desired effects 	<p>JROCM + 48 Months</p>

<p>Supporting: JS J39, USSOCOM and Services</p>	<ul style="list-style-type: none"> • Accounting for the uncertainty of outcomes that results from incomplete or inaccurate understanding of perceptions, attitudes, and other drivers of behavior and the conflation of causation with correlation • Understanding and using new/revised joint targeting tools and databases outlined in materiel recommendations 	
<p>DOTmLPPF-P Category: Training</p> <p>OPR: CCMDs</p> <p>Supporting: OUSD (I)</p>	<p>24. (U) Design and conduct joint exercises for Intelligence/Operations integration that require the Defense Intelligence Enterprise (DIE) to assess and characterize all relevant aspects of the IE as defined in the TTP recommendation #1 including, but not limited to:</p> <ul style="list-style-type: none"> • Relevant actors • Influence pathways (e.g., human networks and the strength of relationships based on cultural, social, economic, geographic factors etc.) • Key terrain • Perceptions, attitudes and other elements that drive behaviors • Review individual-level training deficiencies indicated during collective training events; to include, but not limited to: basis for remedial Joint Intelligence Training actions 	<p>JROCM + 48 Months</p>
<p>DOTmLPPF-P Category: Training</p> <p>OPR: JS J7 and J39</p> <p>Supporting: DIA(ADO/ADI) and CCMDs</p>	<p>25. (U) Develop computer based training modules on Joint Knowledge Online and on AGILE to provide instruction on OIE and requirements to understand informational, physical, and human aspects of the SE; to formulate options to integrated physical and information power; and to execute and modify employment of capabilities.</p>	<p>JROCM + 24 Months</p>
<p>DOTmLPPF-P Category: Materiel</p> <p>OPR: JS J39</p>	<p>26.(U) Coordinate with Defense Information Systems Agency (DISA) to develop standards and their respective profiles in the Defense Information Standards Registry (DISR) for the interchange of data relevant to establish an understanding of the IE, including exploitable vulnerabilities and resiliencies of relevant actors; in accordance with the emerging taxonomy and frameworks developed in the doctrine recommendations. Consider use of the Intelligence Community Enterprise Data Header standard in the future Information Environment.</p>	<p>JROCM + 24 Months</p>
<p>DOTmLPPF-P Category: Materiel</p> <p>OPR: DIA</p>	<p>27.(U) Review and, as appropriate, update the Modernized Integrated Database (MIDB) to support characterization and assessments of informational, physical, and human aspects of the SE including relevant actor profiles; in accordance with the</p>	<p>JROCM + 36 Months</p>

<p>OCR: CCMDs and JS J39</p>	<p>emerging taxonomy and frameworks developed in the doctrine recommendations.</p>	
<p>DOTmLPP-P Category: Leadership and Education</p> <p>OPR: J3/ J39</p> <p>Supporting: JS J7</p>	<p>28. (U) Review and, as appropriate, recommend changes to Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 1800.01E, <i>Officer Professional Military Education Policy</i> and CJCSI 1805.01B, <i>Enlisted Professional Military Education Policy</i>, to incorporate learning objectives across the professional military education (PME) continuum for:</p> <ul style="list-style-type: none"> • Understanding the informational, physical, and human aspects of the SE • Integrating physical and informational activities to achieve desired outcomes • Articulating objectives and risk in terms of behaviors • Understanding the need for critical thinking in the IE across the new competition continuum 	<p>JROCM + 12 Months</p>
<p>DOTmLPP-P Category: Leadership and Education</p> <p>OPR: DIA(ADO/ADI) and J3/ J39</p> <p>Supporting: JS J7, Services, and USSOCOM</p>	<p>30. (U) Review and, as appropriate, revise curricula across all PME venues (Joint and Service) to highlight information as part of a combined arms approach to operations and the integration of physical and informational power through operational art and design to achieve enduring strategic outcomes. Develop learning objectives for relevant aspects of the new and updated doctrine:</p> <ul style="list-style-type: none"> • The advantages of leveraging informational power (informational aspects of military actions and application of capabilities/actions associated with the Information joint function) • The meanings, distinctions, and relationships of the SE, the OE, and the IE • The informational, human, and physical aspects of the SE, including the importance and roles of socio-cultural relationships and their potential impact in identifying relevant actors • The baseline composition, form, function, cultural logic, worldview, relationships, will, and methods of operations for relevant actors across the SE • Assessments of relevant actors and drivers of behavior into center of gravity analysis • Articulate military objectives in terms of actions and behaviors required from relevant actors • Articulate risk in the IE • The presence and impact of bias, heuristics, and other cognitive error on JF and relevant actor decision making, and its potential to create exploitable vulnerabilities. 	<p>JROCM + 36 Months</p>

	<ul style="list-style-type: none"> ○ The range of bias within U.S., interorganizational partners, competitors, and adversaries ○ The approaches to control for bias ○ Leverage bias of competitors and adversaries to support achievement of JF objectives ● For joint planner curriculum <ul style="list-style-type: none"> ○ Address coordination processes with Chiefs of Mission and country teams for OIE outside of declared areas of hostility ○ OIE synchronization under conditions of inconsistent authorities/permissions for various methods and means of applying integrated physical and informational power across the competition continuum 	
<p>DOTmLPPF-P Category: Leadership and Education</p> <p>OPR: DIA</p> <p>Supporting: JS J3/J39</p>	<p>31. (U) Review and, as appropriate, revise course curricula for defense attachés (DAT) and Senior Defense Officials (SDO) to develop an understanding of OIE under conditions other than armed conflict and how their actions impact the IE. Include requirements to:</p> <ul style="list-style-type: none"> ● Understand informational, physical, and human aspects of the SE ● Provide advice about integrating physical and informational power in support of the host nation's Internal Defense and Development programs ● Execute and modify employment of capabilities in response to changes in the SE 	JROCM + 24 Months
<p>DOTmLPPF-P Category: Leadership and Education</p> <p>OPR: Services and Office of the Legal Counsel to the Chairman of the Joint Chiefs of Staff (OCJCS/LC)</p> <p>Supporting: JS J3/J39</p>	<p>32. (U) Review and, as appropriate, revise Staff Judge Advocate curricula to include</p> <ul style="list-style-type: none"> ● Consideration for host nation laws that pertain to activities in the IE ● Understanding the current set of policy, legal, and ethical guidelines for OIE ● Providing advice to commanders and leadership decision-making in the fast paced and ill-defined IE 	JROCM + 24 Months
<p>DOTmLPPF-P Category: Leadership and Education</p>	<p>33. (U) Review and, as appropriate, revise Department of Defense Directive (DoDD) 1315.17, <i>Military Department Foreign Area Officer (FAO) Programs</i>, to establish a requirement for FAOs to have an understanding of OIE and appreciation of the dynamics of the environment as the USG</p>	JROCM + 18 Months

<p>OPR: OUSD (Personnel & Readiness)</p> <p>Supporting: JS J3/J39</p>	<p>applies national power to shape the theater and global OEs during conditions short of armed conflict.</p>	
<p>DOTmLPPF-P Category: Personnel</p> <p>OPR: OUSD (I)</p> <p>Supporting: DIA, JS J39, and Services</p>	<p>34. (U) Review and as appropriate, revise the Defense Intelligence Enterprise (DIE) human capital strategy for accessing, developing, and managing a core of uniformed and civilian OIE professionals. The strategy should establish requirements for:</p> <ul style="list-style-type: none"> • Periodic analysis to identify total manpower requirements for IE specialists (based on ongoing organizational experimentation and CCMD demands) • Coordination with Service manpower analysis activities in response to projected future and emerging conditions, national-strategic plans and objectives, and statements of future operating environments • Adjustments to joint manning documents and tables of distribution in response to CCMD requirements • Develop and periodic updates to relevant accession criteria, joint competency models (discrete set of skills that persons must exhibit to perform their jobs and organizational roles effectively) and subsequent Service updates to proficiency profiles (desired ability in each competency area based upon stage of professional development and role within the JF) • Potential use of incentives (e.g. specialty pay) or direct commissioning to access required subject matter expertise • Development and periodic updates to a comprehensive foreign language and regional socio-cultural proficiency policy • Establishing and updating Service career progression models that incorporate key positions, education, training and KSAs (Recommendation #21) for targeted competencies in periods of competition and conflict 	<p>JROCM + 54 Months</p>
<p>DOTmLPPF-P Category: Personnel</p> <p>OPR: JS J39</p> <p>Supporting: Services and CCMDs</p>	<p>35. (U) Develop joint competency models (based upon revised CJCS learning objectives) for general "operators" as well as functional specialists (e.g. socio-cultural, data scientist, technical, communication, etc.). These models should outline multiple tiers of required OIE understanding at various operational echelons to facilitate Service development of appropriate proficiency profiles and career development models.</p>	<p>JROCM + 48 Months</p>

<p>DOTmLPF-P Category: Personnel</p> <p>OPR: JS J1, CCMDs</p> <p>Supporting: JS J3/J39</p>	<p>36. (U) Review and, as appropriate, revise joint billet descriptions to include additional qualifications to match eligible candidates, to include GO/FO and Senior Executive Service; capture requirements for expertise in applying informational power.</p>	<p>JROCM + 48 Months</p>
<p>DOTmLPF-P Category: Personnel</p> <p>OPR: USD(I), DIA, and CCMDs</p> <p>Supporting: JS J3/J39 and Services</p>	<p>37. (U) Based on revised METs and the associated KSAs, review and define competency requirements for joint billets to determine KSA and career developmental updates to incorporate requirements to understand informational, physical, and human aspects of the SE and to integrate physical and informational power.</p>	<p>JROCM + 60 Months</p>
<p>DOTmLPF-P Category: Personnel</p> <p>OPR: JS J1</p> <p>Supporting: JS J3/J39, USSOCOM, and Services</p>	<p>38. (U) Based on revised METs and the associated KSAs, define the availability and costs of developing and maintaining organic regional and technical subject matter expertise (e.g. socio-cultural, data scientist, technical, communication, etc.) versus leveraging potential partnerships with academic institutions, FFRDCs, or commercial organizations to provide this required expertise (including requirements for responsiveness, access, and clearances etc.).</p>	<p>JROCM + 60 Months</p>
<p>DOTmLPF-P Category: Policy</p> <p>OPR: OUSD Acquisition and Sustainment (A&S)</p> <p>Supporting: Services and JS J39</p>	<p>40. (U) Establish appropriate program elements (PE) to address OIE related requirements for rapid acquisition as validated through the JUONs/JEONs processes.</p>	<p>JROCM + 12 Months</p>
<p>DOTmLPF-P Category: Policy</p> <p>OPR: OUSD (P)</p>	<p>41. (U) Review and, as appropriate, revise DoD issuance or revise DoDD 3600.01, <i>Information Operations (IO)</i>, to establish policy and assign responsibilities for OIE across the range of military operations.</p>	<p>JROCM + 18 Months</p>

<p>Supporting: JS J39</p>		
<p>DOTmLPP-P Category: Policy OPR: JS J3</p>	<p>42. (U) Develop a new directive or revise CJCSI 3210.01C, <i>Joint Information Operations Proponent</i>, to establish JS J39 as the Information joint proponent. This includes responsibilities along three lines of effort: policy and doctrine; planning, operations, and assessments; and joint information force development to facilitate the integration of physical and informational power. In addition to current IO proponent responsibilities, new responsibilities include, but are not limited to:</p> <p>a. (U) Policy and Doctrine Support:</p> <ul style="list-style-type: none"> • Establishing an Executive Agent and Executive Steering Group to oversee efforts to develop IE visualization tools • Developing a database or catalogue that provides situational awareness of DOD efforts for understanding technological developments in human aspects understanding and analysis. Key data includes organizations, objectives, and points of contact • Establishing a community of practice to discuss best practices for implementing and applying the information joint function. The COP should be enabled by a repository of observations of successful and unsuccessful Courses of Action (COAs) for integrating physical and informational power. • Developing processes to identify/define MOPs and MOEs that measure changes in the perceptions, attitudes, and other drivers of behavior in the IE <p>b. (U) Planning, Operations, and Assessment Support:</p> <ul style="list-style-type: none"> • Maintain situational awareness about interorganizational partners operating in the IE to determine operational gaps/seams and to evaluate interorganizational optimization against current threats and challenges • Facilitate access to relevant SME support to JF operations <ul style="list-style-type: none"> -Identify potential sources of relevant SMEs (cultural experts, behavioral scientists, data scientists, etc.) both governmental and non-governmental; existing DOD and USG agreements with these organizations/institutions; and organizational Points of Contact (POCs) for these sources of SMEs to facilitate timely access to required support 	<p>JROCM + 18 Months</p>

	<p>-Where SME access is lacking, evaluate the feasibility of establishing contracts to facilitate on-demand contract support for the provision of SMEs</p> <ul style="list-style-type: none"> • Develop and maintain an architecture of organizations relevant that develop, provide, or apply integrated physical and informational power. Provide access to this architecture to the OIE community of interest to facilitate information sharing • Develop and maintain a "Joint Munitions Effectiveness Manual"-like tool for integrated physical and informational activities. • Coordinate establishment of a cross-CCMD ICCL to help coordinate messaging <p>c. (U) Force Development Support: Establish an annual forum for legal advisors from CCMDs and Joint Staff to review legal restrictions and deconflict authorities and permissions for OIE in conditions cooperation and competition short of armed conflict</p>	
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: Director, Cost Assessment and Program Evaluation (DCAPE), OUSD (P), and the CJCS</p>	<p>43. (U) Review and, as appropriate, revise Defense Planning and Analysis Community strategic level products concerning campaign assessments and force structure alternatives to apply informational power.</p>	<p>JROCM + 48 Months</p>
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: JS J39</p> <p>Supporting: JS J7</p>	<p>44. (U) Design and implement a change management plan to articulate a systematic, strategic approach for integrating programmatic, cultural, and organization behavioral changes required to evolve operational art and design and integrate physical and informational activities. This plan should:</p> <ul style="list-style-type: none"> • Include an enduring communication/outreach plan to inform and subsequently educate the JF on OIE and the way forward and status of initiatives to incorporate information into all JF activities • Provide a framework and roadmap to empower leaders to lead change, motivate staff to adopt new practices and behaviors, and establish mechanisms to measure progress and sustain performance in conducting OIE • Actions to inform interorganizational partners 	<p>JROCM + 48 Months</p>

<p>DOTmLPF-P Category: Policy</p> <p>OPR: JS J8</p> <p>Supporting: JS J5, J7, J39</p>	<p>45. (U) Review and, as appropriate, revise the DoD Modeling and Simulation Steering Committee corporate and cross-cutting business plan to prioritize plans and programs for DOD social science-based modeling to better understand and exploit the IE. Include requirements for social science, sociotechnical, and other relevant collaborative modeling and laboratory experiments. Modeling objectives should include:</p> <ul style="list-style-type: none"> • The ability to depict and explain relevant actor relationships, motivations, perceptions, attitudes, and projected behavior in response to activities in the IE • The ability to provide support for Joint Strategic Planning System analysis 	<p>JROCM + 12 Months</p>
<p>DOTmLPF-P Category: Policy</p> <p>OPR: OUSD Research and Engineering (R&E)</p> <p>Supporting: JS J39</p>	<p>46. (U) Assess resources, plans and programs for DOD social science-based modeling and, as appropriate, adjust 6.2 and 6.3 funding to facilitate development and transition of social science related capabilities.</p>	<p>JROCM + 24 Months</p>
<p>DOTmLPF-P Category: Policy</p> <p>OPR: OUSD (P)</p> <p>Supporting: JS J39</p>	<p>47. (U) Review and, as appropriate, revise the <i>Strategy for Operations in the Information Environment</i> to account for the institutionalization/operationalization of integrated physical and informational power. Include acknowledgement of Information as a joint function, and incorporate actions recommended in the OIE CBA and approved by the Joint Requirements Oversight Council.</p>	<p>JROCM + 12 Months</p>
<p>DOTmLPF-P Category: Policy</p> <p>OPR: OUSD (P)</p>	<p>48. (U) Review and, as appropriate, revise Contingency Planning Guidance (CPG) to provide specific guidance for integrating physical and informational power to affect the observations, perceptions, decisions, and behaviors of relevant actors; to protect and ensure the observations, perceptions, decisions, and behaviors of the Joint Force; and to acquire, process, distribute, and employ data (information) in pursuit of strategic objectives.</p> <ul style="list-style-type: none"> • Identify specific relevant actors and their desired behaviors, an initial broad set of authorities, and permissions for the JF to conduct integrated physical and informational operations. • Establish requirements for training, advising, and assisting actions to improve interorganizational partner capability and capacity. 	<p>JROCM + 12 Months</p>

	<ul style="list-style-type: none"> • Establish information intermediate military objectives in campaign plans and information objectives in contingency plans. • Establish near (0-2 years), mid (3-5 years) and far (>5 years) term goals, in the 2+3 construct, for relevant actor behavior global information strategies. 	
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: JS J5</p> <p>Supporting: JS J39</p>	<p>49. (U) Review and, as appropriate, revise the National Military Strategy (NMS) and the Joint Strategic Campaign Plan (JSCP) to provide specific guidance for integrating physical and informational power.</p> <ul style="list-style-type: none"> • Specify a requirement for subordinate plans to identify relevant actors and their desired behaviors • Specify a requirement for base plans to incorporate how the Joint Force will gain and maintain an information advantage through operations in the information environment • Require integrated campaign information plans • Include requirements for U.S. Northern Command (USNORTHCOM) to synchronize CCMDs and coordinate with interorganizational partners to integrate approaches for physical and informational activities to counter threats to the homeland • Designate Communication Strategy Analysis Division (CSAD) to integrate physical and informational power at the JS, CCMDs, and Services, as part of the Chairman's global integration responsibilities 	JROCM + 24 Months
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: JS J5</p> <p>Supporting: JS J39</p>	<p>50. (U) Revise Adaptive Planning and Execution (APEX) procedures to provide specific guidance for Joint Planning and Execution Community (JPEC) reviews of CONPLANS to include specific articulation of objectives and intent to apply physical and informational power to create desired behaviors.</p>	JROCM + 36 Months
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: JS J5</p> <p>Supporting: JS J39</p>	<p>51. (U) Coordinate with CCMDs to incorporate planning for OIE during PROMOTE COOPERATION events.</p>	JROCM + 72 Months
<p>DOTmLPPF-P Category: Policy</p> <p>OPR: OUSD (P)</p>	<p>52. (U) In conjunction with CPG and JSCP revision, review and, as appropriate, revise DOD guidance for permissions to facilitate synchronized execution of integrated physical and informational activities. Consider adopting decision criteria based upon desired outcomes versus capability type.</p>	JROCM + 48 Months

Supporting: JS J39		
DOTmLPPF-P Category: Policy OPR: OUSD (P) Supporting: JS J39	53. (U) Review CCMD requirements and impediments for implementing the information joint function and, as appropriate, recommend revisions to U.S. Code to facilitate the integration of physical and informational aspects of military activities.	JROCM + 60 Months
DOTmLPPF-P Category: Policy OPR: OUSD (I) and OUSD (P)	54. (U) Review and, as appropriate, revise the Integrated Defense Intelligence Priorities to better support OIE. Subsequently, recommend that Office of the Director of National Intelligence (ODNI) review the National Intelligence Priorities Framework (NIPF) for prioritization and category applicability for OIE and add OIE as a National Intelligence Management (NIM) cross-cutting topic.	JROCM + 12 Months
DOTmLPPF-P Category: Policy OPR: OUSD (I) and DIA	55. (U) Evaluate and, as appropriate, develop a management structure, policies, and procedures for developing Open Source Intelligence on the same scale as HUMINT and technology focused intelligence disciplines.	JROCM + 30 Months
DOTmLPPF-P Category: Policy OPR: OUSD (P)	56. (U) Recommend that the DepSecDef direct development of a management structure, policies, and procedures for acquiring, storing, and potentially analyzing publicly available information (PAI) about the SE that is not related to intelligence requirements.	JROCM + 30 Months
DOTmLPPF-P Category: Policy OPR: OUSD (R&E)	57. (U) Establish a consortium of agencies, Services, and the Defense Science Board to evaluate vulnerabilities and resiliencies that arise from the use of emerging technologies and devices (e.g. artificial intelligence, machine decision making, etc.). Specifically, a broad review of emerging capabilities not currently used by the DoD.	JROCM + 24 Months
DOTmLPPF-P Category: Policy OPR: OUSD (P) Supporting: JS J39	58. (U) Recommend that Deputy Secretary of Defense (DepSecDef) engage and support the National Security Council, the Department of State (DOS), US Agency for International Development (USAID), and other interagency partners to develop a whole of government approach for OIE to drive desired behaviors of relevant actors: <ul style="list-style-type: none"> • In accordance with the Report of the Defense Science Board Study, <i>Capabilities for Constrained Military Operations</i>, recommend that a Presidential Directive be issued to outline a strategy and interagency framework and to provide direction for a whole-of-government approach for integrating physical and informational power 	JROCM + 18 Months

	<ul style="list-style-type: none"> • Recommend that (1) the Global Engagement Center's mission be expanded from "countering the adverse effects" of foreign state and non-state propaganda and disinformation to "coordinating USG actions to apply informational power or (2) Reestablish the U.S. Information Agency to understand, inform, and influence foreign publics..." • Establish formalized partnership with DOS and an interagency workgroup to enable a whole-of-government approach • Recommend that DOS establish a foreign mission partner information crisis communication lines (ICCL) based on the current partner, national, and state ICCLs to help coordinate messaging • Recommend that Department of State provide instruction to public diplomacy officials about OIE. 	
DOTmLPPF-P Category: Policy OPR: Services	59. (U) Review and, as appropriate, revise the military-civilian exchange programs with interorganizational partners (governmental, Allies, foreign partners, academic, and commercial) to facilitate mutual understanding and skills for integrating physical and informational power. Consider including Warrant Officers and Non-Commissioned Officers.	JROCM + 18 Months
DOTmLPPF-P Category: Policy OPR: OUSD (P) Supporting: JS J39	60. (U) Review the Goldwater Nichols Act and, as appropriate, recommend that DepSecDef propose legislative changes to evolve the JF model beyond DOD to incorporate stronger interagency presence and a whole-of-government approach.	JROCM + 36 Months
DOTmLPPF-P Category: Policy OPR: DoD CIO	61. (U) Review and, as appropriate, revise Department of Defense Instruction (DoDI) 8500.01, <i>Cybersecurity</i> , DODI 8510.01 <i>Risk Management Framework (RMF) for DoD Information Technology (IT)</i> , and DODI 8550.01, <i>Internet Services and Internet-based Capabilities</i> , to: <ul style="list-style-type: none"> • Establish criteria for identifying those with access requirements to restricted areas of the internet • Establish a process to allow authorized individuals to gain protected access to all necessary areas of the internet 	JROCM + 18 Months

<p>DOTmLPF-P Category: Policy OPR: J3/J39 Supporting: JS J5 and National Defense University (NDU) (United States Army War College)</p>	<p>62. (U) Revise the CJCSM 3130.01A, Campaign Planning Procedures and Responsibilities to account for integrating physical and informational power to affect the observations, perceptions, decisions, and behaviors of relevant actors; to protect and ensure the observations, perceptions, decisions, and behaviors of the Joint Force; and to acquire, process, distribute, and employ data (information) in pursuit of strategic objectives.</p>	<p>JROCM + 24 Months</p>
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