

Process innovation pilots: lowering early-stage barriers to entry and survival

John Kamp

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Disclaimer

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Common barriers to market entry

Competition view: Five Forces Barriers to Entry (Porter, 2008)	DoD view: DIB Barriers to Entry (OUSD(A&S), 2022)	Industry view: Small Business Barriers to Entry (Stewart & Van Steenburg, 2024)
<ul style="list-style-type: none">• Supply-side economies of scale• Demand-side benefits of scale (“<i>network effects</i>”)• Customer switching costs• Capital requirements• Size-independent incumbency advantages (“brand,” “location,” “experience”)• Unequal access to distribution channels	<ul style="list-style-type: none">• Low margins• Low and unpredictable demand• Little incentive to add new capabilities• Restrictions in non-defense market sales• Supply chain capacity• Competition limited by mergers and acquisitions• Non-commercial business processes and regulations• Substandard technical data• Unique materials• Quality standards• Bespoke requirements• Limited sales volume	<ul style="list-style-type: none">• Complex <i>and protracted</i> procurement practices (time to award)• Federal budget processes (cash flow)• Non-compliance risk• Contracting burden• Cybersecurity cost of entry Risk of Intellectual Property transfer to competitors• Lack of small business <i>institutional support</i>

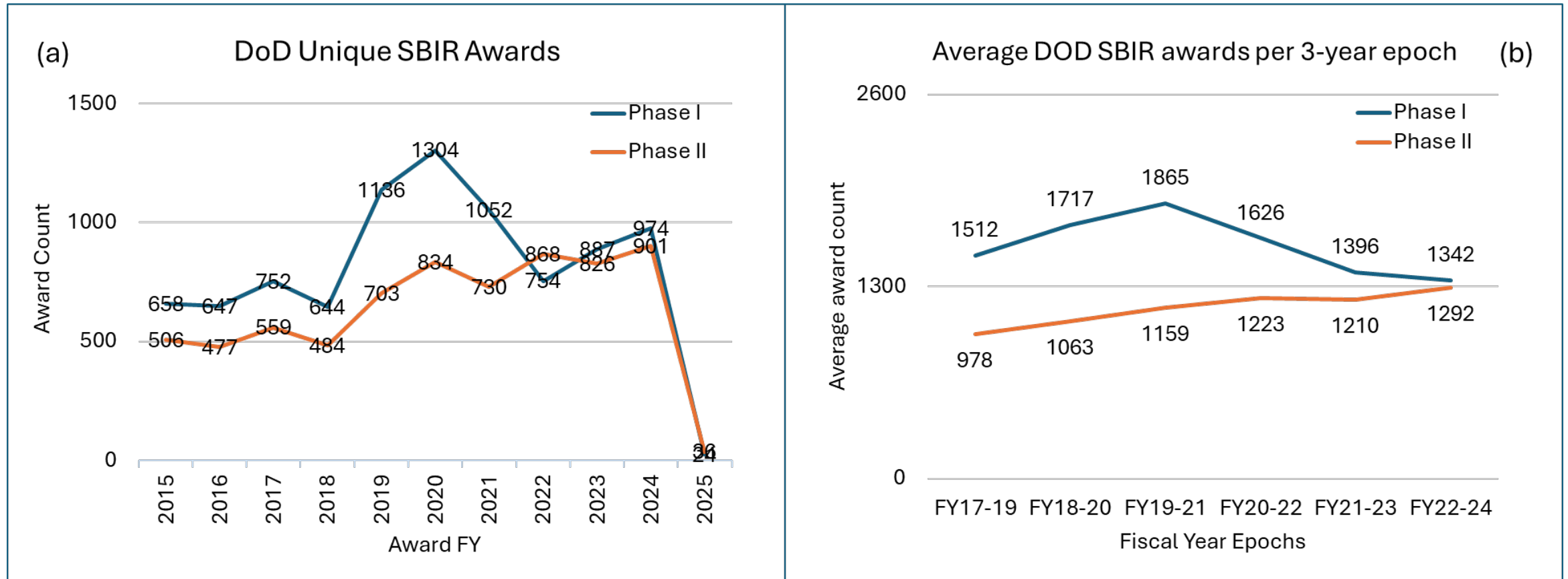


Common barriers to innovation in the DoD

Defense Innovation Board barriers to innovation (Bloomberg et al., 2024)	Public innovation barriers (Uyarra et al., 2014)	Organizational barriers (Anthony et al., 2019)
<ul style="list-style-type: none">• Status quo (lack of leadership)• Management of (personnel, physical, industrial) security• Limited access to Sensitive Compartmented Information Facilities (SCIFs)• Outdated SCIF security standards• Limited duration clearances• Insufficient security clearance investigation support• Burdensome DoD contracting requirements• Intellectual property not shared• Insufficient market research prior to award• Burdensome security requirements on non-traditional firms• Self-imposed dual use constraints• Accessible SBIR performance data	<ul style="list-style-type: none">• Excessive perceived economic risk• Too high innovation costs• Cost of finance• Availability of finance• Lack of qualified personnel• Lack of information on technology• Lack of information on markets• Market dominated by established enterprises• Uncertain demand for innovative goods or services• Regulation	<ul style="list-style-type: none">• Low priority (time, incentive, resources)• Not client-driven• Experiment (risk) averse• Lack curiosity, knowledge, experience• Status quo culture “inertia”• lack of support/ infrastructure



DOD SBIR awards history



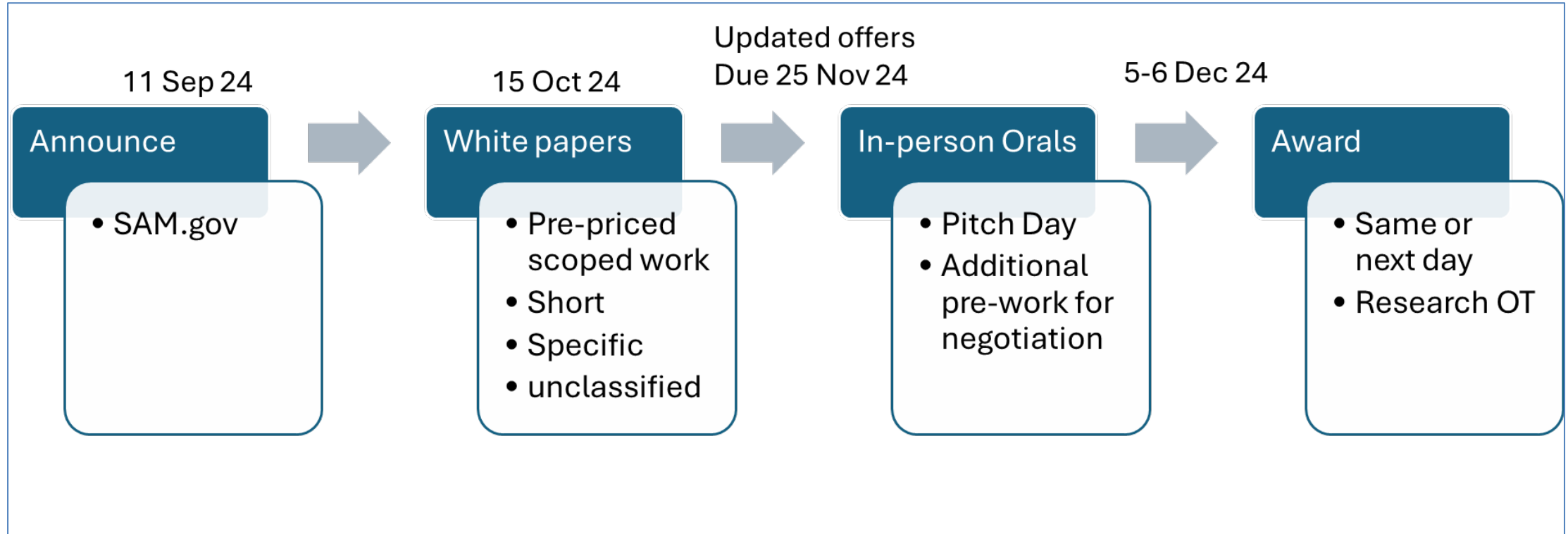


DOD SBIR awards history

DOD.SBIR.FY	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Phase I											
Total FY awards	1132	1213	1451	1173	1912	2065	1617	1197	1373	1455	26
Unique firm award count	658	647	752	644	1136	1304	1052	754	887	974	24
No award to firm	3974	3985	3880	3988	3496	3328	3580	3878	3745	3658	4608
% SB with award	14.2%	14.0%	16.2%	13.9%	24.5%	28.2%	22.7%	16.3%	19.1%	21.0%	0.5%
% SB without award	85.8%	86.0%	83.8%	86.1%	75.5%	71.8%	77.3%	83.7%	80.9%	79.0%	99.5%
Phase II											
Total FY awards	790	739	983	780	1172	1238	1068	1363	1200	1313	37
Unique firm award count	506	477	559	484	703	834	730	868	826	901	36
No award to firm	2872	2901	2819	2894	2675	2544	2648	2510	2552	2477	3342
% SB with award	15.0%	14.1%	16.5%	14.3%	20.8%	24.7%	21.6%	25.7%	24.5%	26.7%	1.1%
% SB without award	85.0%	85.9%	83.5%	85.7%	79.2%	75.3%	78.4%	74.3%	75.5%	73.3%	98.9%



BTO Pitch Day summary – increase impact and velocity





Commercial strategies – increase impact and velocity

- The Embedded Entrepreneur Initiative (EEI)
 - embeds a successful entrepreneur within performer teams to help build and execute go-to-market strategies;
- Commercial Accelerators
 - provide firms access to commercial expertise, ecosystems, and investor networks;
- Tiger Teams
 - help firms create high impact solutions to DoD and commercial problems; and
- Venture Horizons
 - connects top-tier private investors with DARPA program managers and performers.





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