



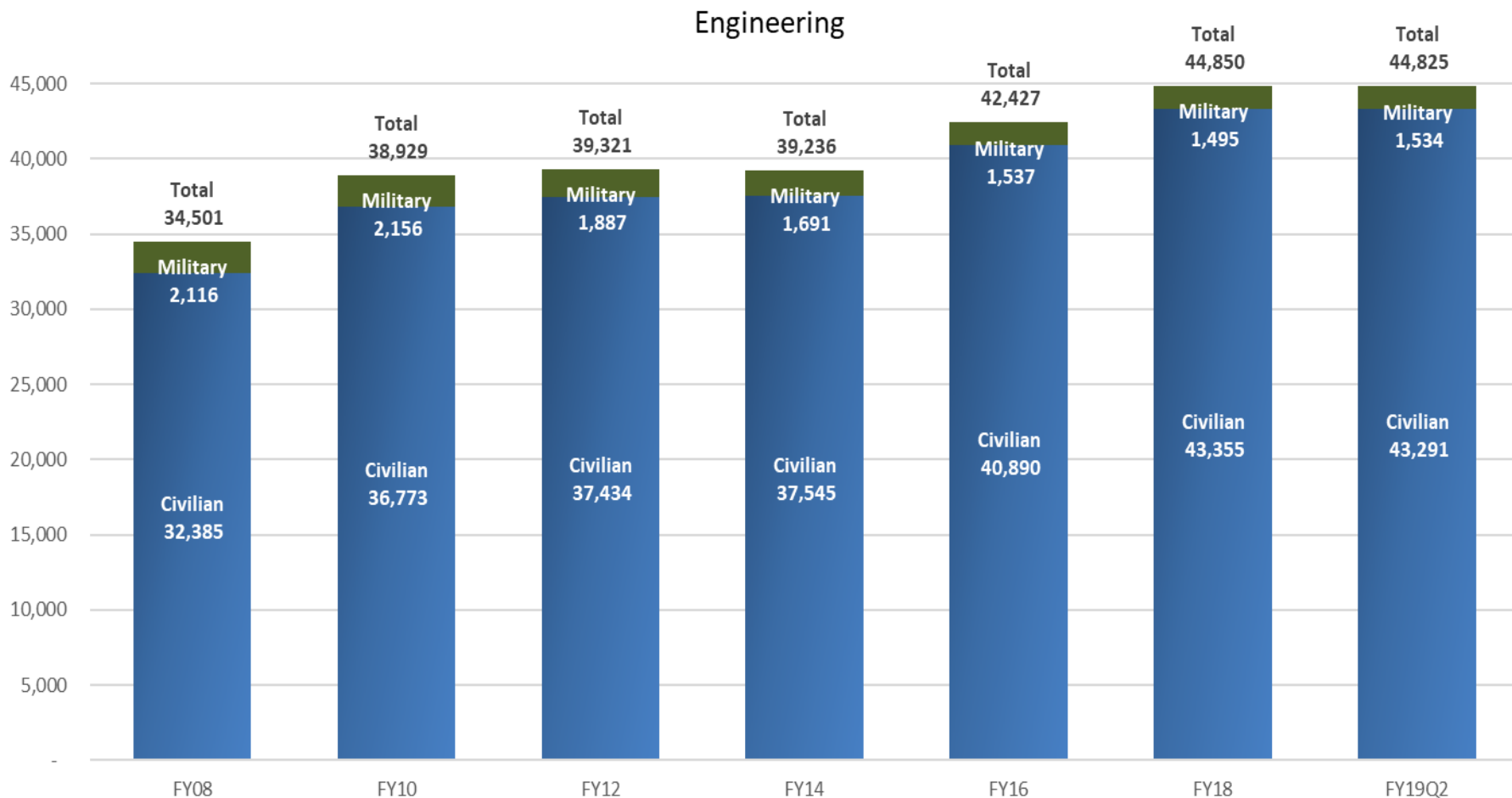
Defense Acquisition Workforce Key Information

Engineering

As of FY19Q2 (31 March 2018)

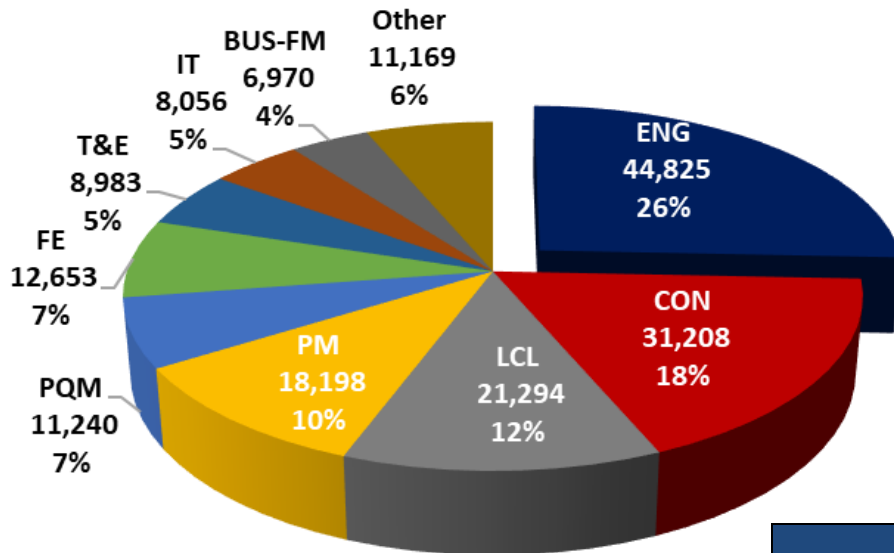


Engineering Total Workforce





AWF by Component and Career Field



FY 2019 Q2	Army	Navy	Marine Corps	Air Force	4th Estate	Totals	% Total
Auditing	-	-	-	-	4,082	4,082	2.3%
Business - CE	254	555	35	517	92	1,453	0.8%
Business - FM	1,775	2,194	179	2,218	604	6,970	4.0%
Contracting	8,045	6,250	538	8,170	8,205	31,208	17.9%
Engineering	9,094	23,608	325	9,652	2,146	44,825	25.7%
Facilities Engineering	5,954	5,871	32	701	95	12,653	7.2%
Information Technology	1,860	3,477	226	1,422	1,071	8,056	4.6%
Life Cycle Logistics	6,941	6,451	705	3,762	3,435	21,294	12.2%
Production, Quality and Man	1,368	3,804	43	472	5,553	11,240	6.4%
Program Management	3,334	5,780	761	6,417	1,906	18,198	10.4%
Property	50	71	-	14	277	412	0.2%
Purchasing	273	373	37	47	474	1,204	0.7%
S&T Manager	489	518	4	2,854	135	4,000	2.3%
Test and Evaluation	1,930	3,292	142	3,265	354	8,983	5.1%
Unknown/Other	7	2	1	-	8	18	0.01%
Totals	41,374	62,246	3,028	39,511	28,437	174,596	
Component %	23.7%	35.7%	1.7%	22.6%	16.3%		



Engineering Workforce Historical Size by Agency FY08 – FY19



Engineering Defense Acq Workforce Agency	FY08	FY10	FY12	FY14	FY16	FY18	FY19Q2	% Change Since FY08	% Change Since FY18
Navy	16,353	18,932	19,121	19,423	21,623	23,678	23,608	44%	0%
MARINE CORPS	223	338	377	374	354	336	325	46%	-3%
AIR FORCE	6,429	7,625	8,649	8,473	9,139	9,535	9,652	50%	1%
ARMY	10,769	10,644	9,810	8,981	9,140	9,160	9,094	-16%	-1%
DCMA	282	813	974	1,157	1,271	1,238	1,241	340%	0%
MDA	281	623	644	605	601	604	606	116%	0%
DISA	89	58	69	74	70	89	87	-2%	-2%
NRO	-	-	-	-	66	64	69		8%
DAU	33	46	49	40	45	48	48	45%	0%
DTRA	7	27	35	44	47	21	18	157%	-14%
DMEA	-	29	23	20	32	27	27		0%
OSD	31	25	21	23	22	16	14	-55%	-13%
DLA	19	16	11	11	13	12	13	-32%	8%
DHA	2	9	10	6	4	9	10	400%	11%
JCS	-	-	12	10	7	8	8		0%
DeCA	-	-	-	-	3	4	4		0%
TRMC	-	-	1	1	1	1	1		0%
DTIC	1	-	-	-	-	-	-	-100%	
DSCA	1	-	-	-	-	-	-	-100%	
IG	1	-	-	-	-	-	-	-100%	
ASD	-	4	1	-	-	-	-		
4th Estate Other	16	12	-	-	-	-	-	-100%	
TOTAL	34,537	39,201	39,807	39,242	42,438	44,850	44,825	↑ 30%	↓ 0%



Engineering Workforce Historical Size by Agency (Quarterly)



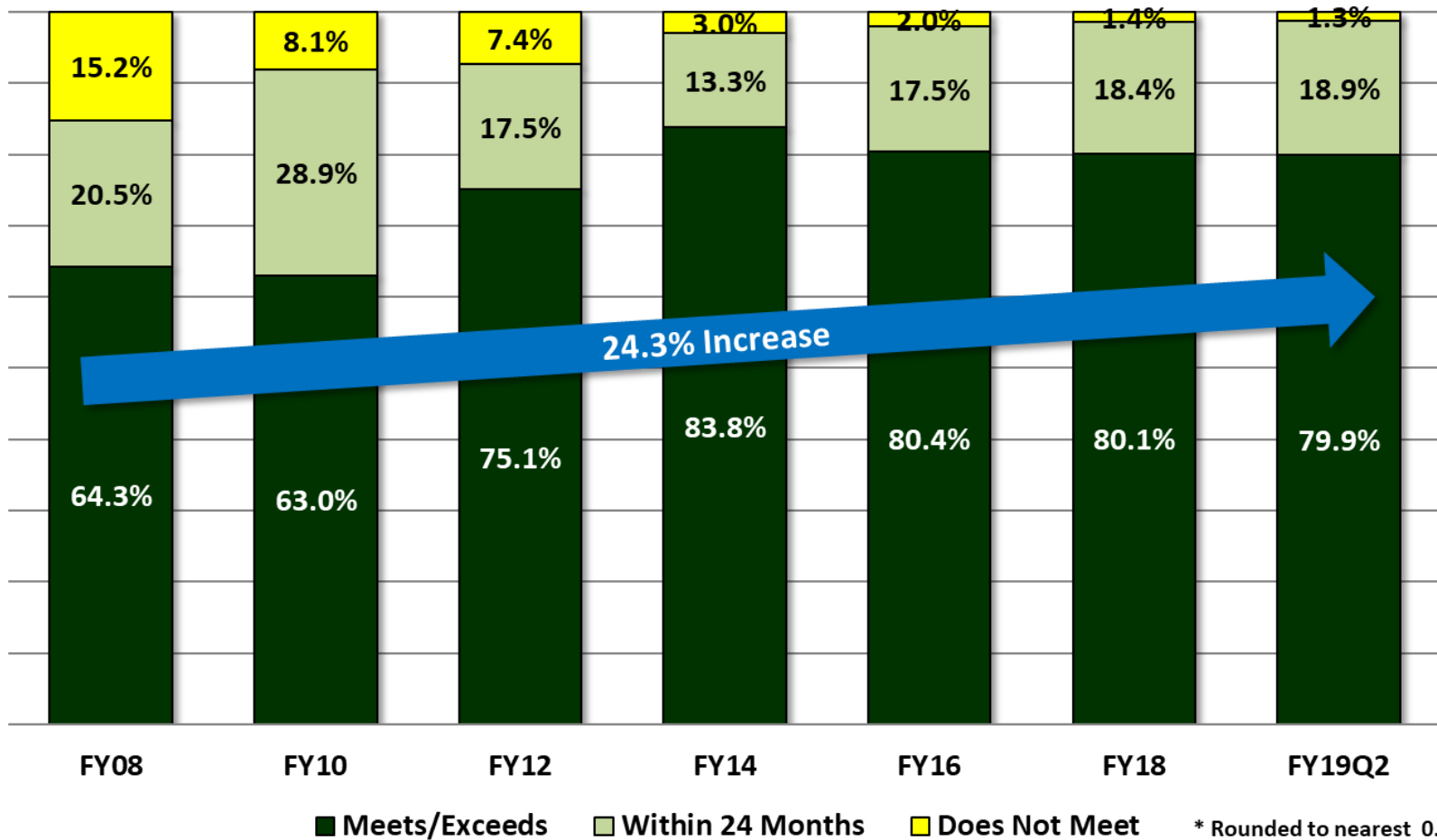
Engineering Defense Acq Workforce Agency	FY17Q2	FY17Q3	FY17Q4	FY18Q1	FY18Q2	FY18Q3	FY18Q4	FY19Q1	FY19Q2	% Change Since FY18Q2
Navy	21,668	21,777	22,297	22,276	22,376	22,726	23,678	23,650	23,608	6%
MARINE CORPS	353	357	341	339	336	342	336	328	325	-3%
AIR FORCE	9,221	9,211	9,276	9,178	9,271	9,385	9,535	9,604	9,652	4%
ARMY	9,122	9,008	9,096	9,084	9,060	9,024	9,160	9,148	9,094	0%
DCMA	1,262	1,239	1,229	1,226	1,231	1,220	1,238	1,223	1,241	1%
MDA	597	605	603	597	594	594	604	602	606	2%
DISA	73	72	66	68	66	68	89	88	87	32%
NRO	72	75	78	78	72	56	64	64	69	-4%
DAU	44	46	43	46	47	48	48	48	48	2%
DTRA	42	39	35	31	30	30	21	18	18	-40%
DMEA	31	31	31	32	31	29	27	27	27	-13%
OSD	22	23	22	22	22	21	16	16	14	-36%
DLA	12	13	14	14	14	15	12	12	13	-7%
DHA	4	6	8	8	9	9	9	10	10	11%
JCS	7	7	6	6	8	7	8	8	8	0%
DeCA	2	1	3	4	4	5	4	3	4	0%
TRMC	1	1	1	1	1	1	1	1	1	0%
TOTAL	42,533	42,511	43,149	43,010	43,172	43,580	44,850	44,850	44,825	↑ 4%



Engineering Manager Historical DAWIA Certification FY08 – FY19



Engineering



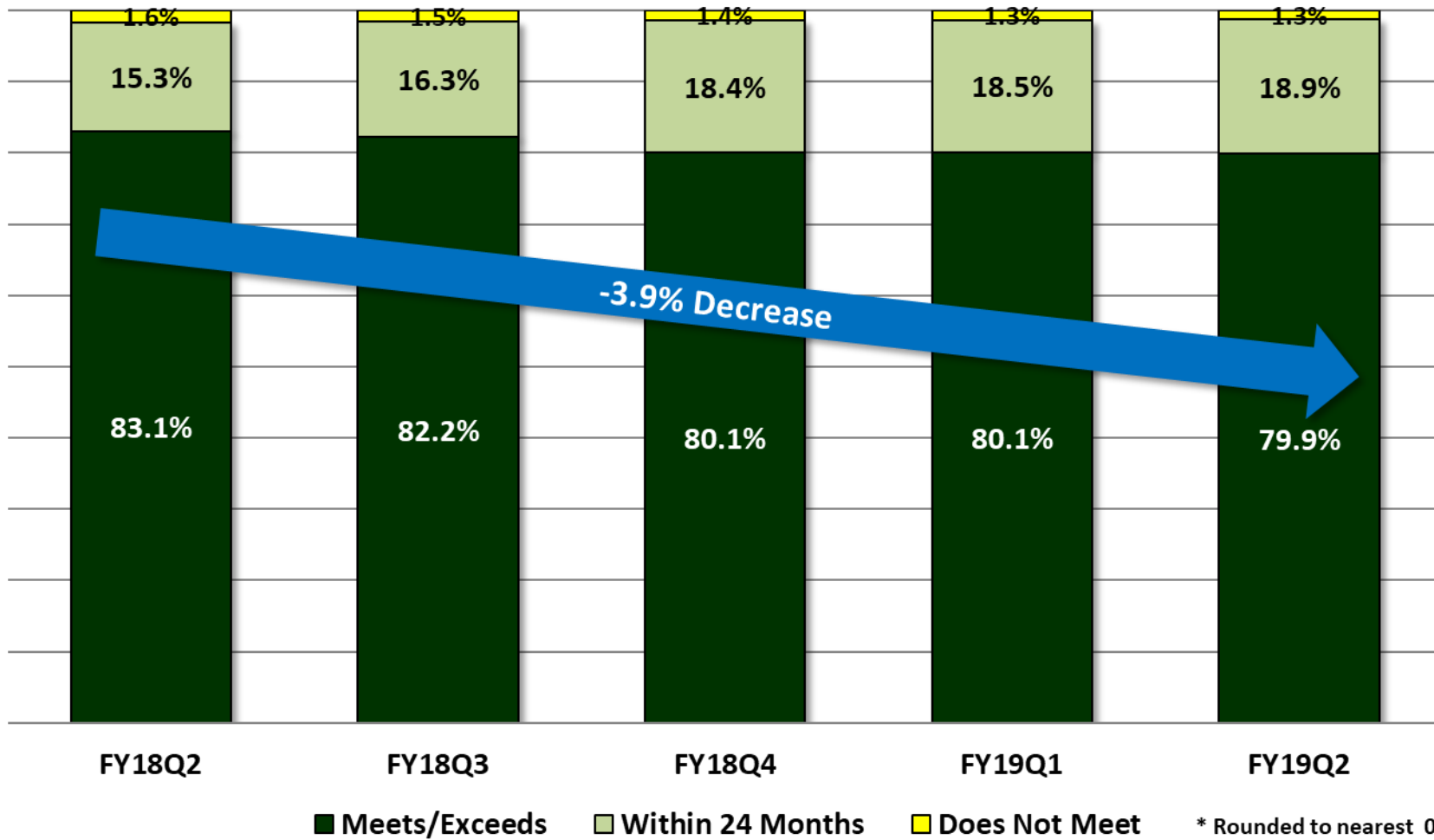
24.3% Increase



Engineering Manager Historical (Quarterly) DAWIA Certification



Engineering

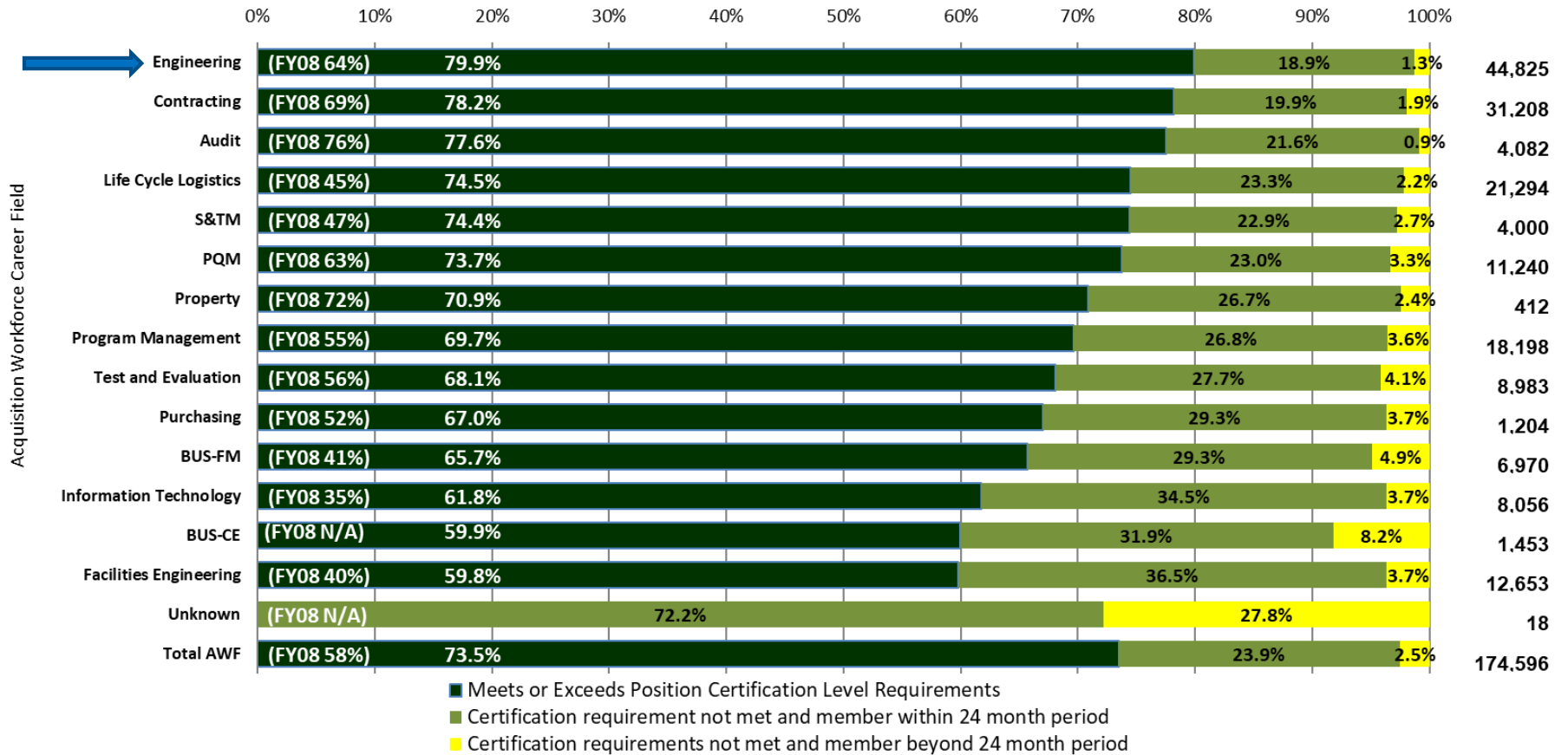




DAWIA Certification by Career Field



Certification Level "Meet/Exceed" Rates by Career Field AWF (FY19Q2)

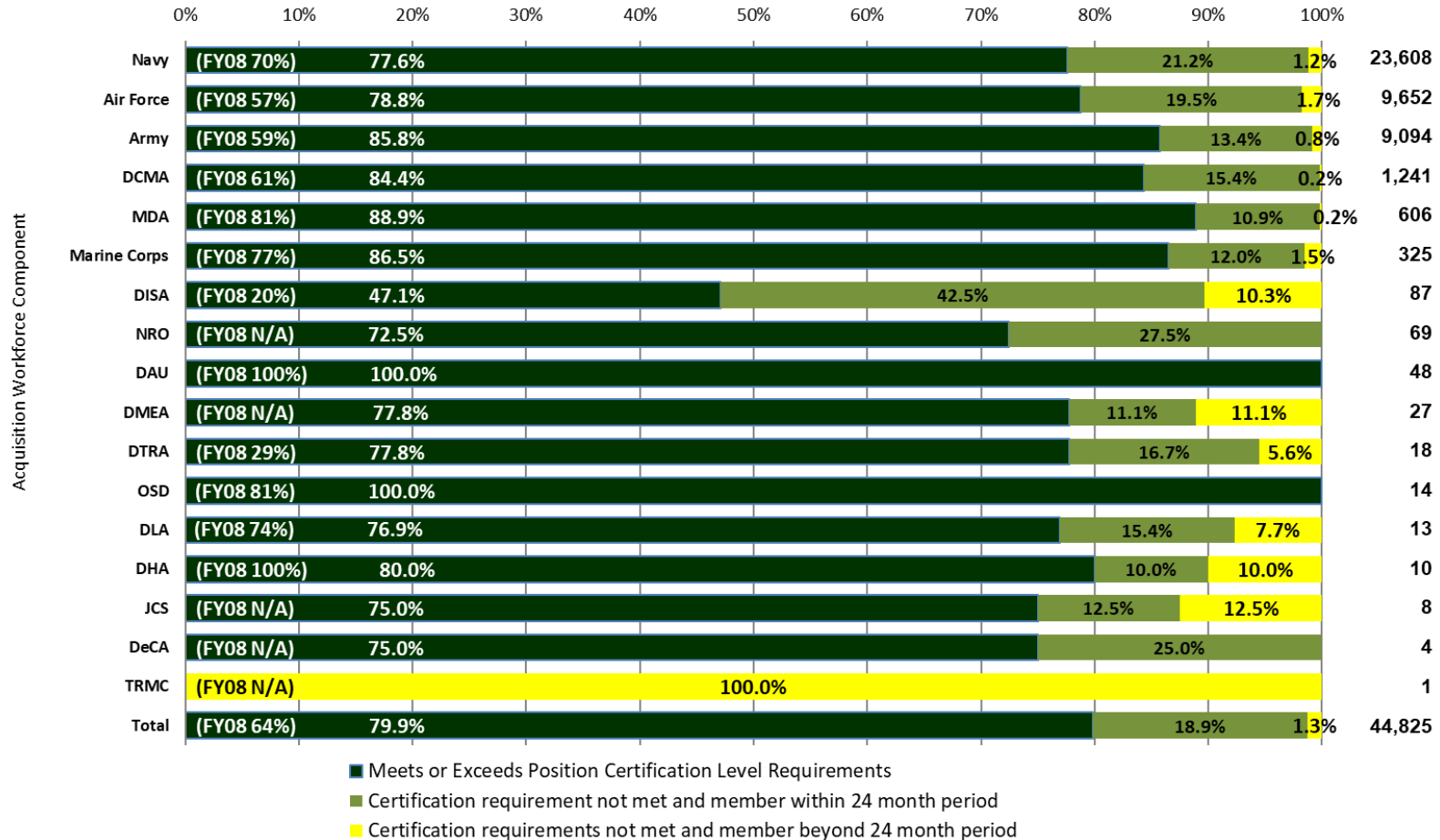


■ Meets or Exceeds Position Certification Level Requirements
■ Certification requirement not met and member within 24 month period
■ Certification requirements not met and member beyond 24 month period



Engineering DAWIA Certification by Component

Certification Level "Meet/Exceed" Rates by Component Engineering (FY19Q2)





Engineering DAWIA Certification Matrix + Bench Strength

Engineering Required Certification Level	Achieved Certification Level				FY19Q2 TOTAL	% Meets Certification Requirement
	No Level Achieved	Level I	Level II	Level III		
Level I	3,694	4,966	1,622	1,628	11,910	69.0%
Level II	1,777	1,912	7,194	6,820	17,703	79.2%
Level III	566	305	763	13,574	15,208	89.3%
Unspecified	2	-	1	1	4	
FY19Q2 TOTAL	6,039	7,183	9,580	22,023	44,825	79.9%
	13.5%	16.0%	21.4%	49.1%		

No Level Achieved includes those within the 24 month grace period

Bench Strength			
Org	# Meet or Exceeds	% Meets or Exceeds*	Career Field Rank
DAW	128,380	73.5%	
Army	31,862	77.0%	
Navy	45,086	72.4%	
Marine Cor	2,047	67.6%	
Air Force	27,352	69.2%	
4th Estate	22,033	77.5%	
Engineering	35,804	79.9%	1 of 14

** Based on population total without unspecified positions

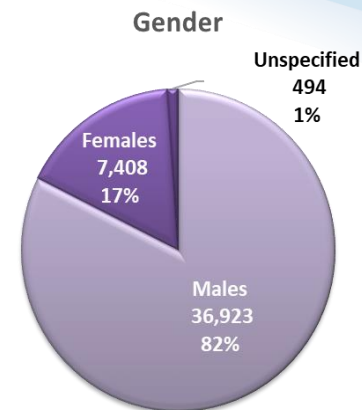
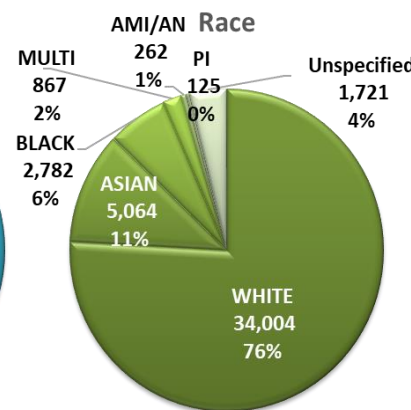
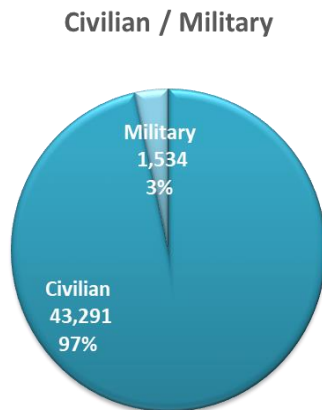
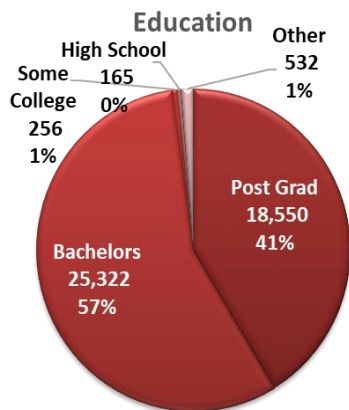
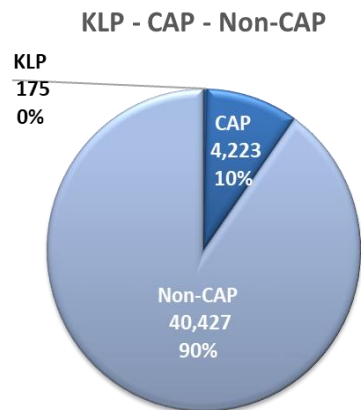
Certification Requirement	Meets	Within 24 Months	Does Not Meet	DAW TOTAL	
Level I	8,216	3,666	28	11,910	26.6%
Level II	14,014	3,336	353	17,703	39.5%
Level III	13,574	1,453	181	15,208	33.9%
Unspecified	1	3	-	4	0.0%
Engineering TOTAL	35,805	8,458	562	44,825	
	79.9%	18.9%	1.3%		

 = Compliance
 = Exceeds Requirements

* NOTE: Rounded to nearest 0.1%



Demographics



Occupied Position Type	ENG TOTAL	Entire AWF
Key Leadership Positions (KLPs)	175 <i>0.4%</i>	1,242 <i>0.7%</i>
Critical Acquisition Positions (CAPs) *	4,223 <i>9.4%</i>	16,708 <i>9.6%</i>
Non-CAP Positions	40,427 <i>90.2%</i>	156,646 <i>89.7%</i>
Unknown	- <i>0.0%</i>	- <i>0.0%</i>
TOTAL	44,825	174,596

* = Number of CAPs, excluding KLPs (no double counts)

Race	ENG TOTAL	Entire DAW
WHITE	34,004 <i>75.9%</i>	127,583 <i>73.1%</i>
ASIAN	5,064 <i>11.3%</i>	21,036 <i>12.0%</i>
BLACK	2,782 <i>6.2%</i>	11,990 <i>6.9%</i>
MULTI	867 <i>1.9%</i>	4,829 <i>2.8%</i>
AMI/AN	262 <i>0.6%</i>	1,133 <i>0.6%</i>
PI	125 <i>0.3%</i>	903 <i>0.5%</i>
Unspecified	1,721 <i>3.8%</i>	7,122 <i>4.1%</i>
TOTAL	44,825	174,596

Highest Level of Education	ENG TOTAL	Entire AWF
Post Grad	18,550 <i>41.4%</i>	70,018 <i>40.1%</i>
Bachelors	25,322 <i>56.5%</i>	77,243 <i>44.2%</i>
Some College	256 <i>0.6%</i>	12,151 <i>7.0%</i>
High School	165 <i>0.4%</i>	12,718 <i>7.3%</i>
Other	532 <i>1.2%</i>	2,466 <i>1.4%</i>
TOTAL	44,825	174,596

Gender	ENG TOTAL	Entire DAW
Males	36,923 <i>82.4%</i>	122,206 <i>70.0%</i>
Females	7,408 <i>16.5%</i>	50,436 <i>28.9%</i>
Unspecified	494 <i>1.1%</i>	1,954 <i>1.1%</i>
TOTAL	44,825	174,596

Type	ENG TOTAL	Entire AWF
Civilian	43,291 <i>96.6%</i>	158,922 <i>91.0%</i>
Military	1,534 <i>3.4%</i>	15,674 <i>9.0%</i>
TOTAL	44,825	174,596



Engineering Size by Occupational Series

Civilian Occupational Series	ENG TOTAL	
0855 - Engineer, Electronics	10,452	24.1%
0801 - Engineer, General	8,908	20.6%
0830 - Engineer, Mechanical	6,849	15.8%
0861 - Engineer, Aerospace	3,074	7.1%
0854 - Engineer, Computers	2,694	6.2%
0850 - Engineer, Electrical	1,740	4.0%
1550 - Computer Scientist	4,415	10.2%
1515 - Operations Research Analyst	683	1.6%
1310 - Physicist	636	1.5%
Other	3,337	7.7%
TOTAL CIVILIAN	43,291	Civilians



**RAND NDRI Forces and Resources
Policy Center Data
Retirement / Loss Slides
FY19Q1**



Fact Sheet



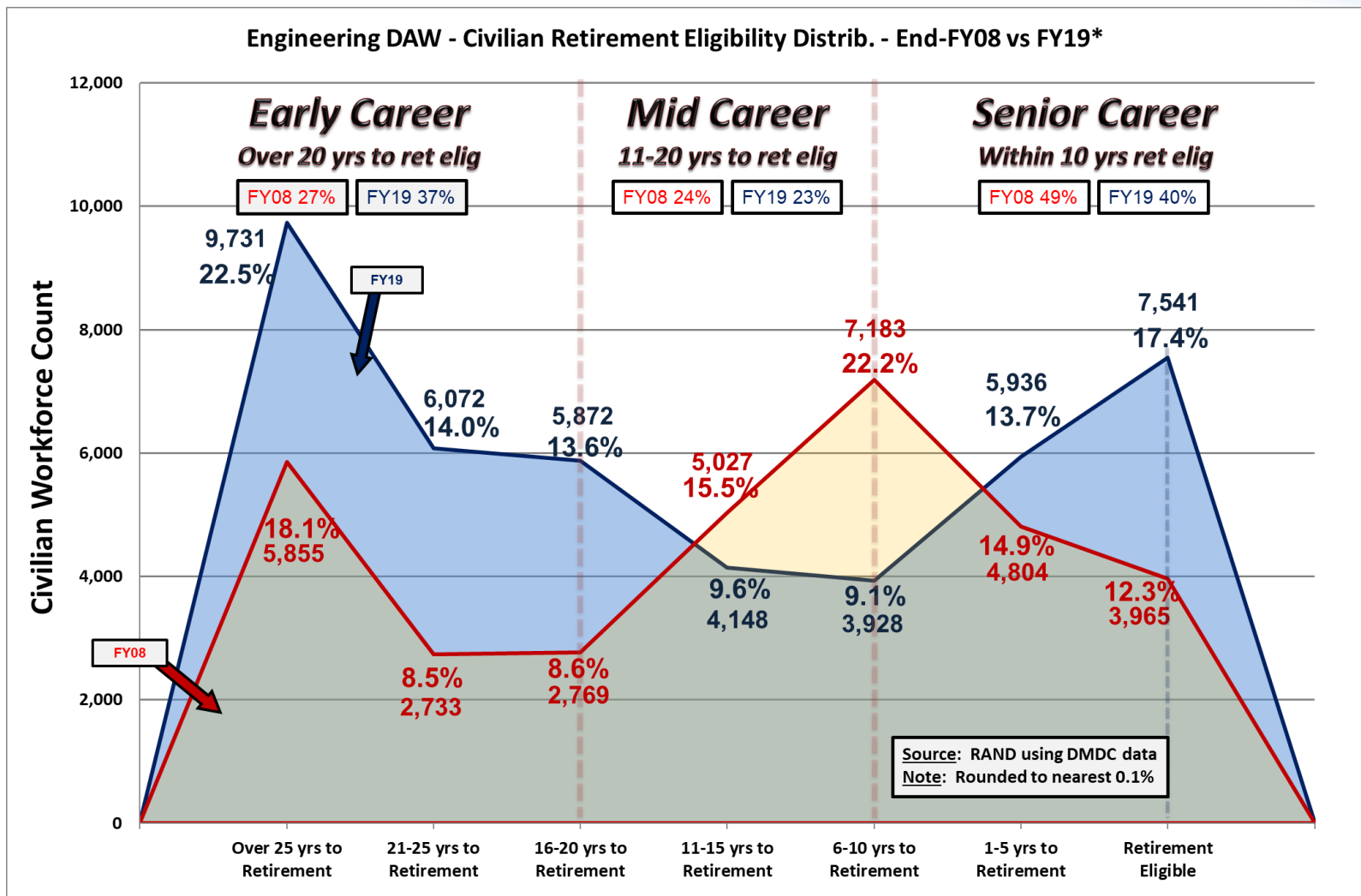
Human Capital Fact Sheet

Defense Acquisition Workforce Engineering	FY 2008				FY2019Q1			
	Engineering Civilian (Civ)	Engineering Military (Mil)	Total Engineering (Civ+Mil)	Defense Acquisition Workforce	Engineering Civilian (Civ)	Engineering Military (Mil)	Total Engineering (Civ+Mil)	Defense Acquisition Workforce
Size & Composition								
Workforce Size	32,385	2,116	34,501	125,879	43,330	1,520	44,850	173,599
Change in size from 2008	-		-	-	34%	-28%	30%	38%
Civilian/Military Composition	94%	6%	-	88% / 12%	97%	3%	-	91% / 9%
Educational Attainment								
Bachelor's Degree or Higher	98%	596%	98%	77%	98%	97%	98%	84%
Graduate Degree	36%	45%	36%	29%	41%	60%	41%	40%
Certification								
Level I or Higher Achieved	78%	57%	77%	72%	87%	77%	87%	83%
Level II or Higher Achieved	70%	25%	68%	61%	72%	48%	71%	70%
Level III Achieved	58%	8%	55%	36%	51%	20%	50%	40%
Position Certification Requirement Met or Exceeded	67%	31%	64%	58%	81%	58%	80%	74%
Within 24 Months of Certification Requirement	18%	52%	20%	27%	18%	38%	19%	23%
Does Not Meet Certification Requirement	15%	17%	15%	14%	1%	4%	1%	3%
Planning Considerations								
Average Age	45	33	44	46	43	32	42	44
Workforce Life-Cycle Model (YRE)* % Future/Mid-Career/Senior	27/24/49(%)		-	20/23/57 (%)(Civ)	37/23/40(%)		-	26/27/47(%)
Average Years of Service	17	9	16	17	15	9	15	15
Retirement Eligible*	3,965(12%)	-	-	19,051(17%) (Civ)	7,541(17%)	-	-	27,402(17%)
Retirement Eligible w/in 5 Years*	4,804(15%)	-	-	21,315(19%) (Civ)	5,936(14%)	-	-	25,072(16%)
Total Gains/Losses*	4,050/4,197	-	-	14,245/15,030 (Civ)	5,170/3,355	-	-	20,099/12,261

Source: Data generated by OUSD(A&S)/Human Capital Initiatives using the A&S Workforce Data Mart & analysis support from RAND.

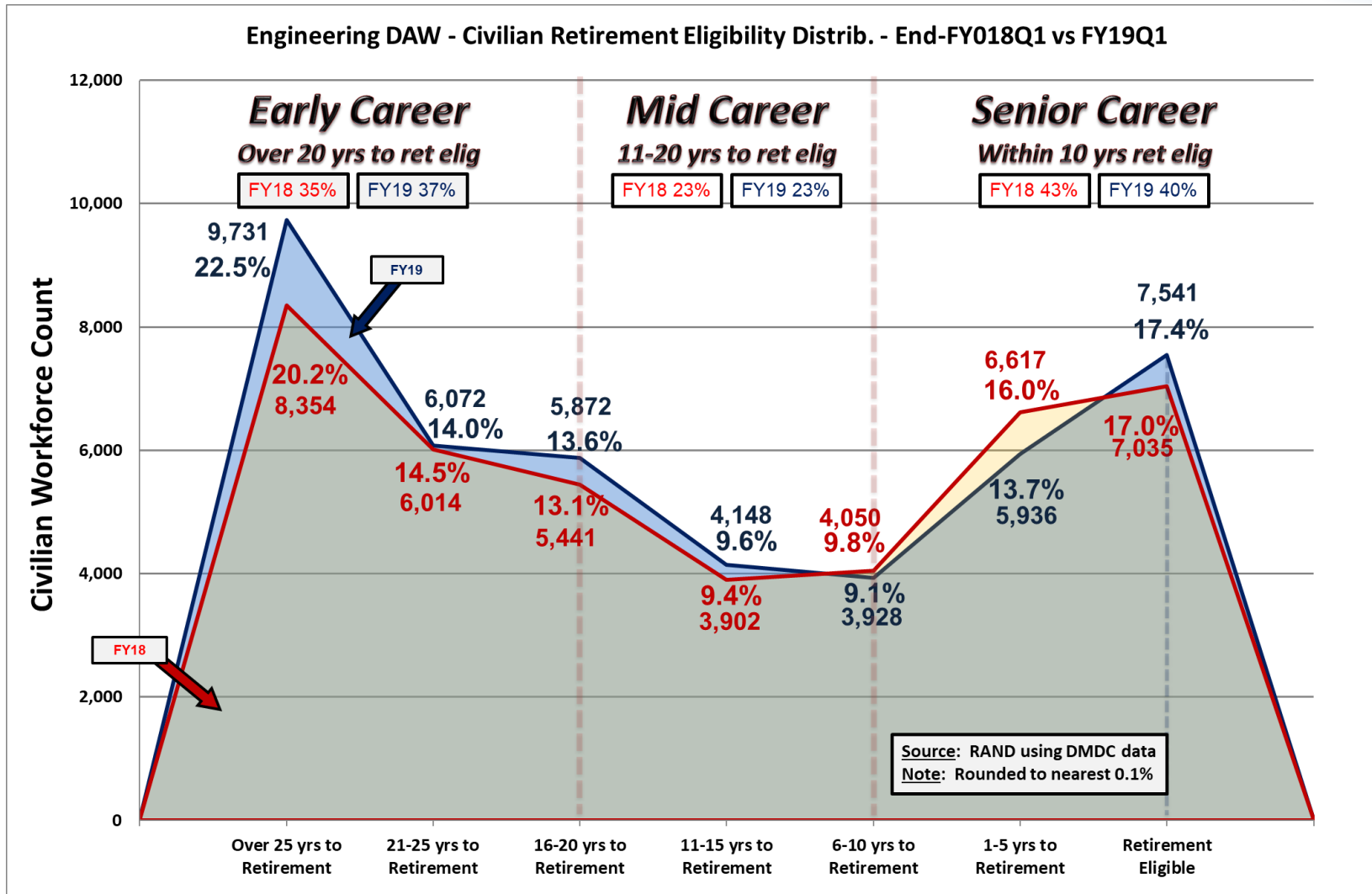


Engineering Civilian Retirement Eligibility Distribution – FY08 / FY19





Engineering Civilian Retirement Eligibility Distribution – 1 year



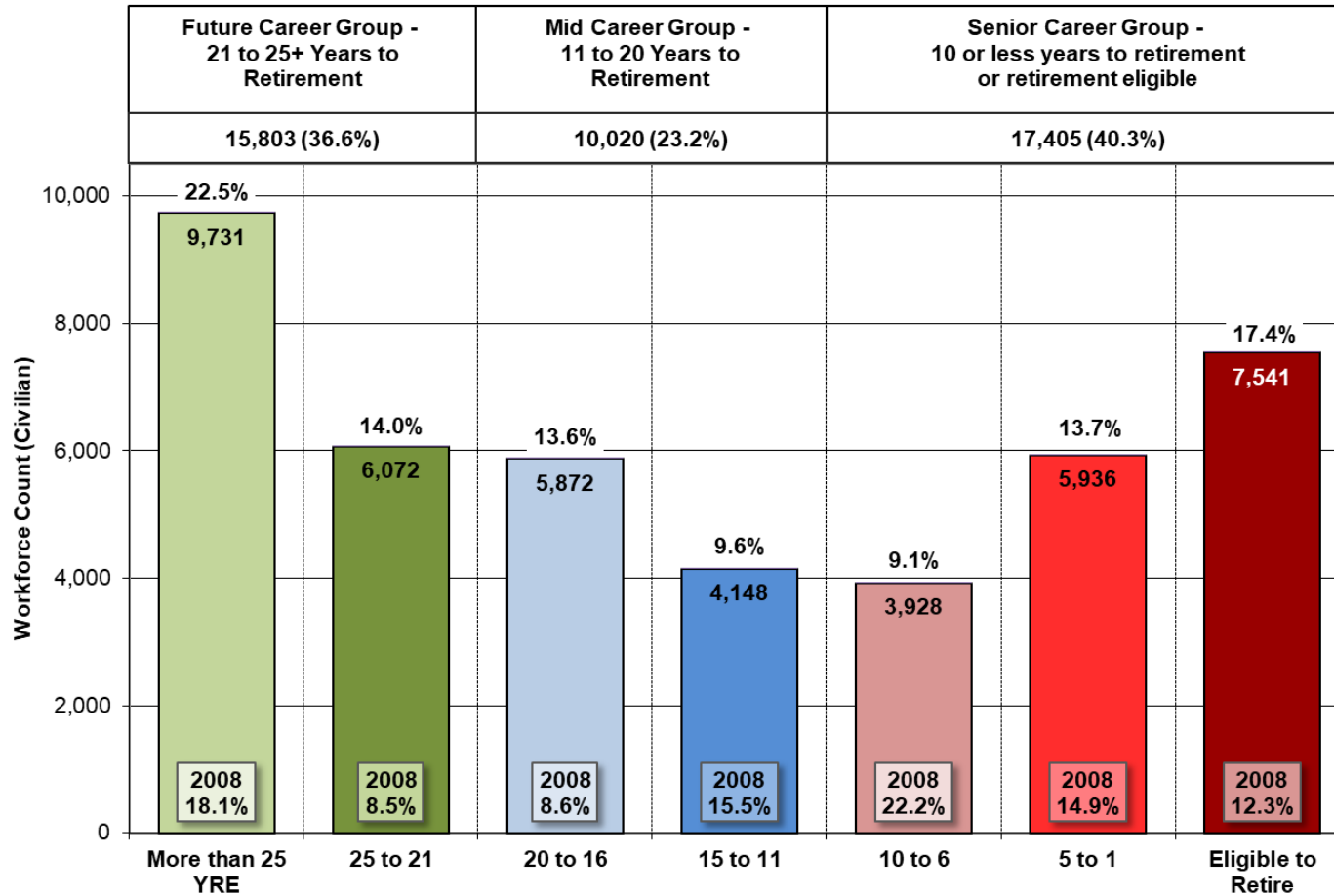
As of 31 Dec 2018



Engineering Workforce Lifecycle Model by YRE

Defense Acquisition Workforce Lifecycle Model (WLM)

by Years to Retirement Eligibility (YRE) - Civilian (FY2019Q1)



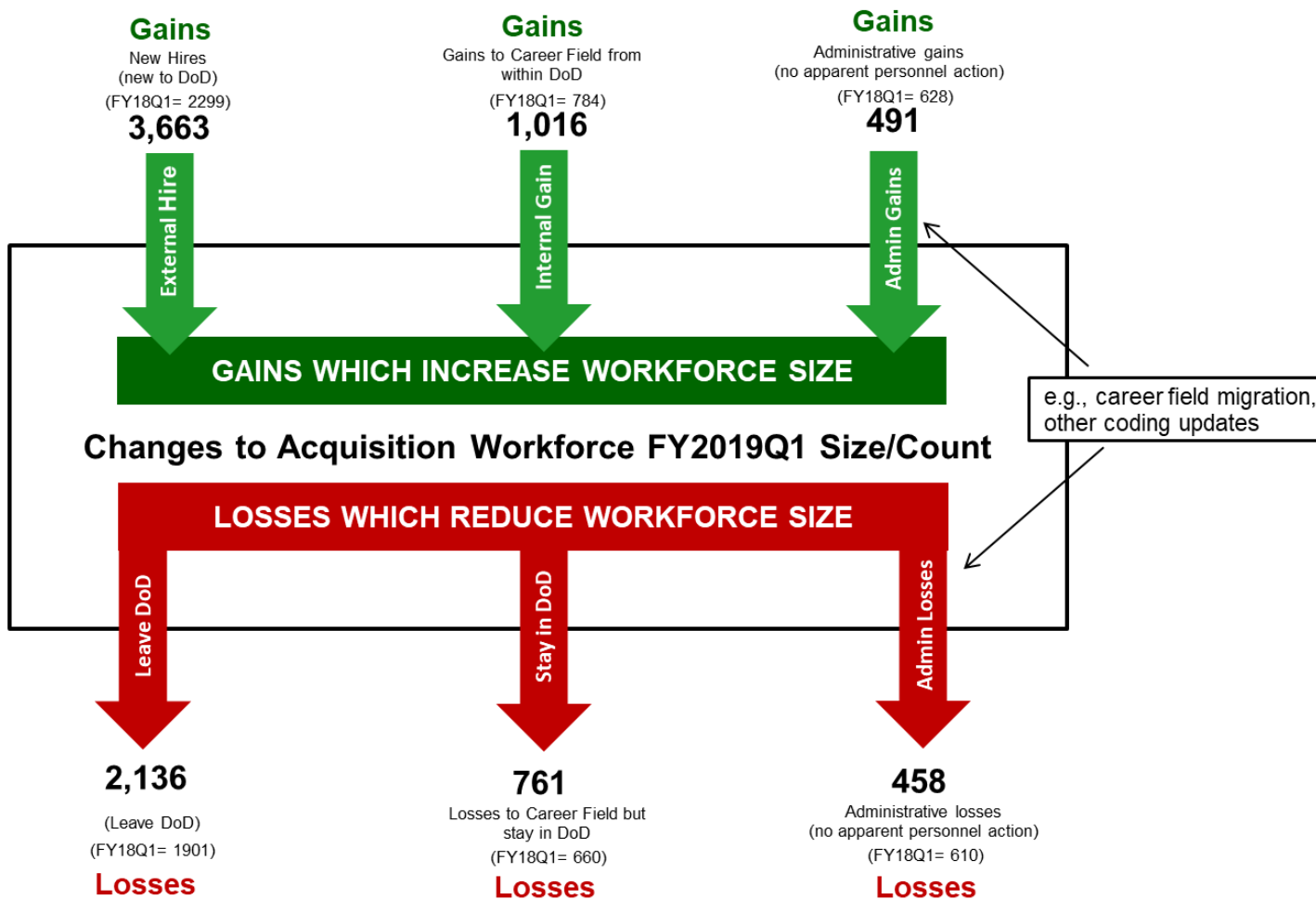
As of 31 Dec 2018



Engineering Gains/Losses – New Hires Internal/External, Administrative

Defense Acquisition Workforce (Civilian) (FY2019Q1)

Gains and Losses by External to DoD, Internal to DoD, and Administrative Categories

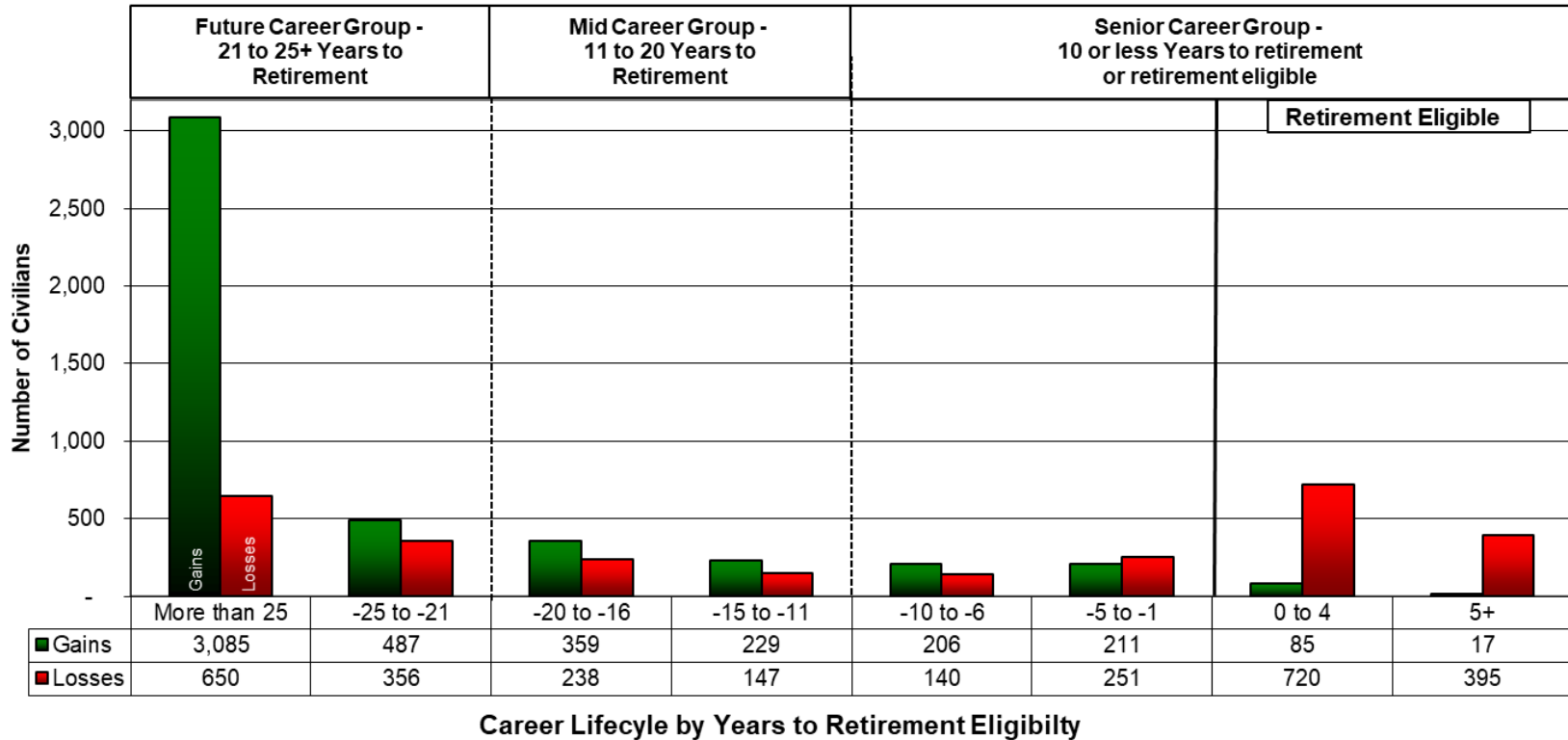




Engineering Gains and Losses by YRE Groups

Defense Acquisition Workforce (Civilian)

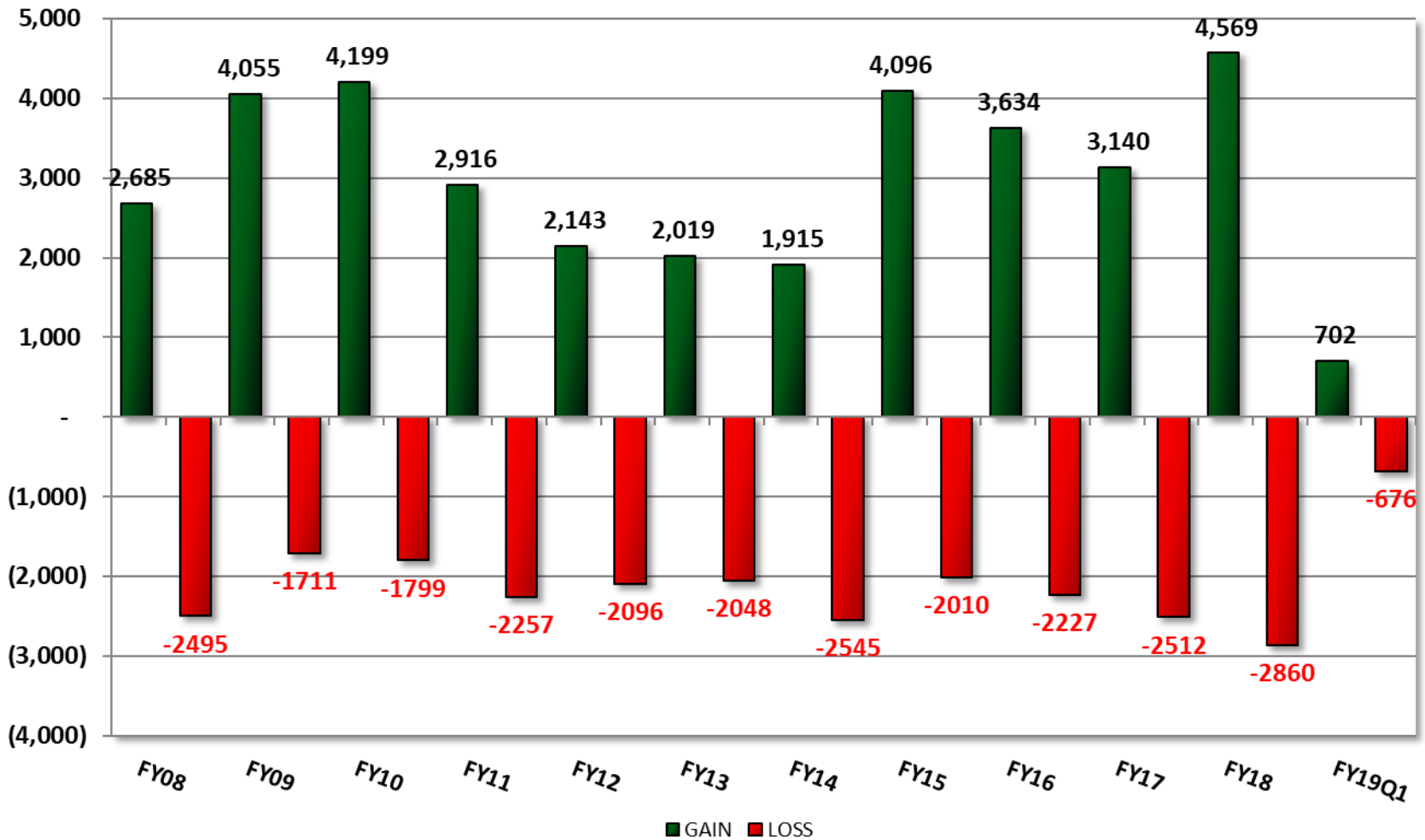
Workforce Lifecycle FY2019Q1 Gains & Losses*



*Does not include administrative gains and losses



Engineering Historical Gains and Losses FY08 – FY19



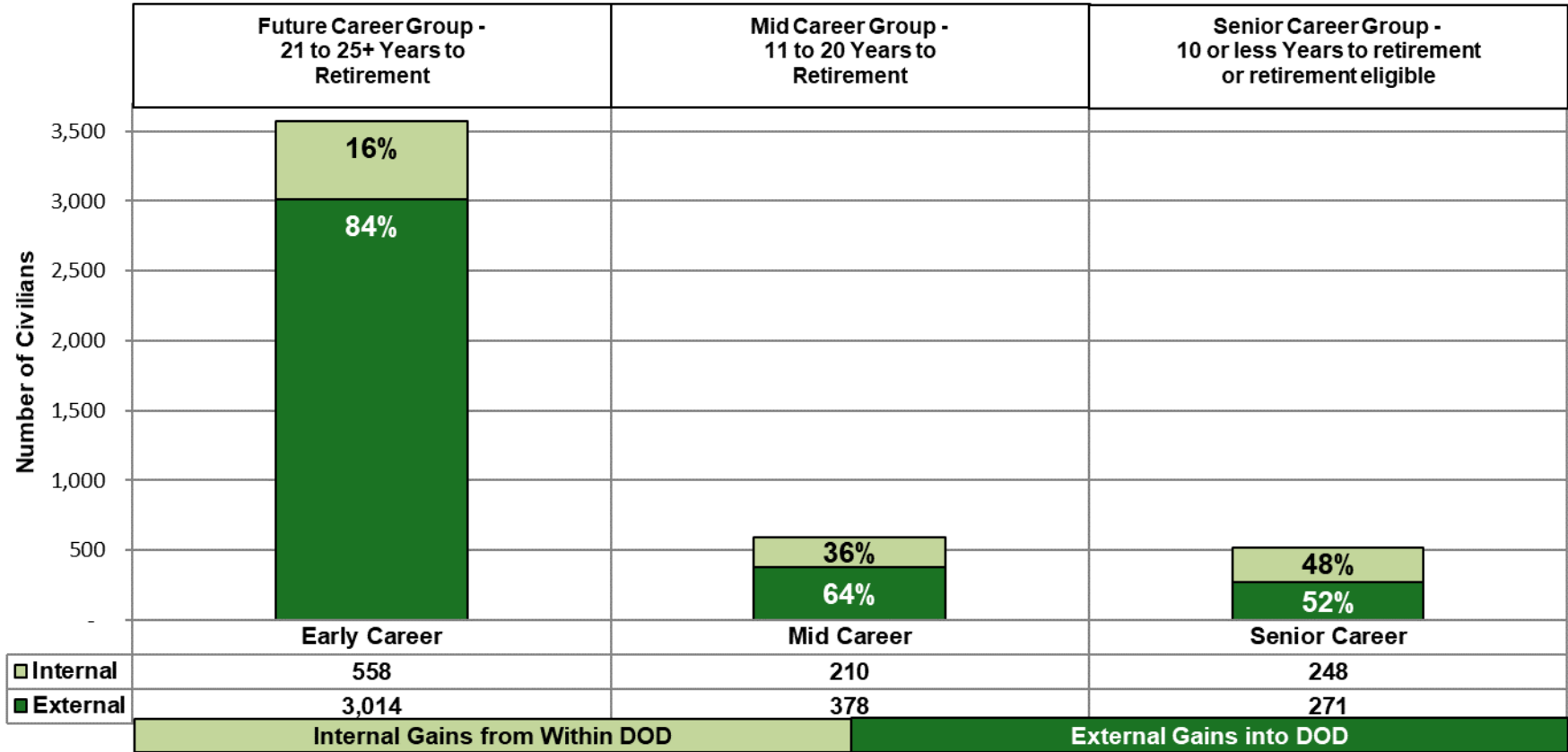
As of 31 Dec 2018



Engineering Internal/External Gains % by Career Group



Defense Acquisition Workforce (Civilian) Workforce Lifecycle FY2019Q1 Gains*



*Does not include administrative gains

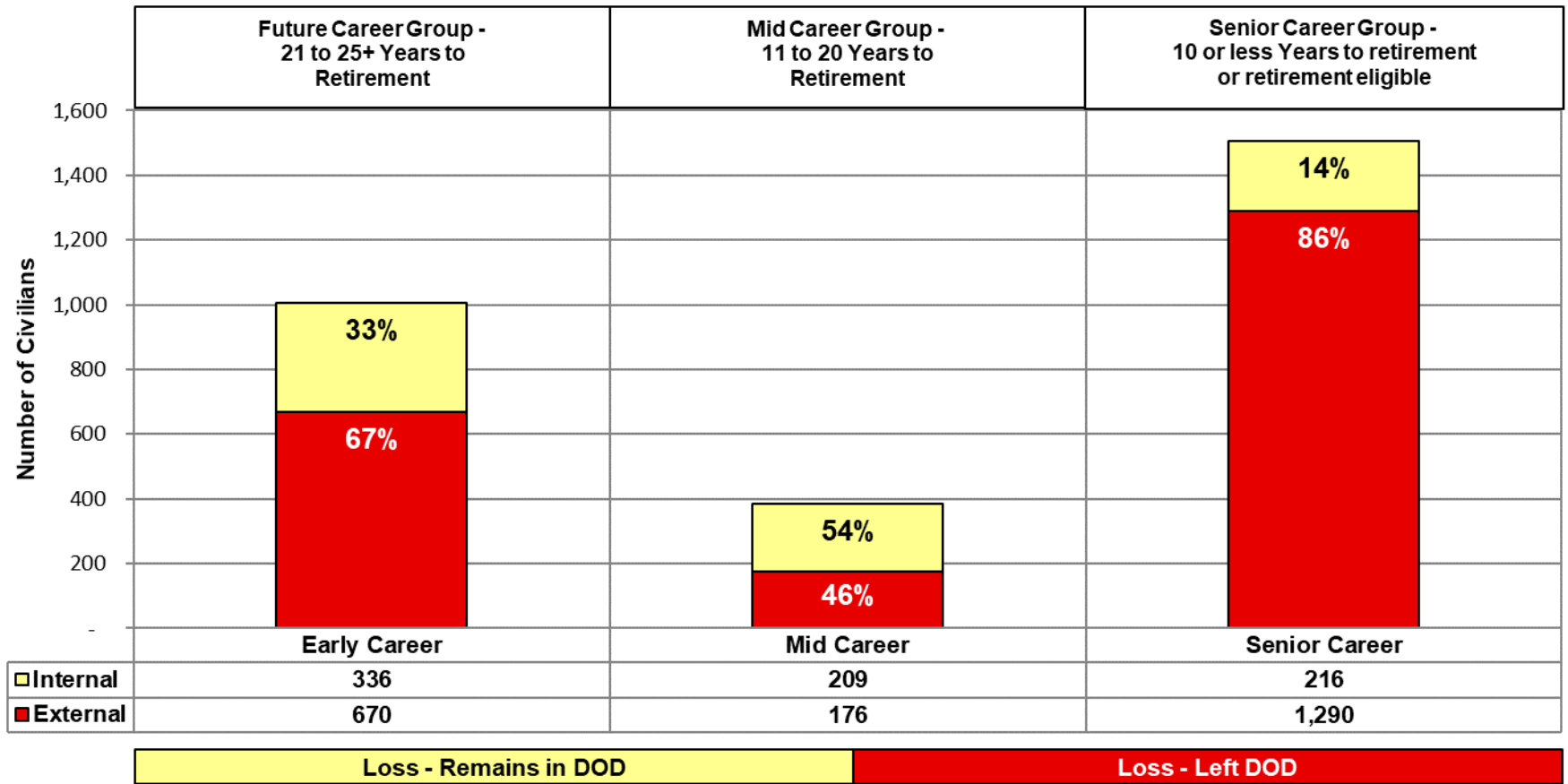
As of 31 Dec 2018



Engineering Internal/External Loss % by Career Group

Defense Acquisition Workforce (Civilian)

Workforce Lifecycle FY2019Q1 Losses*



*Does not include administrative losses

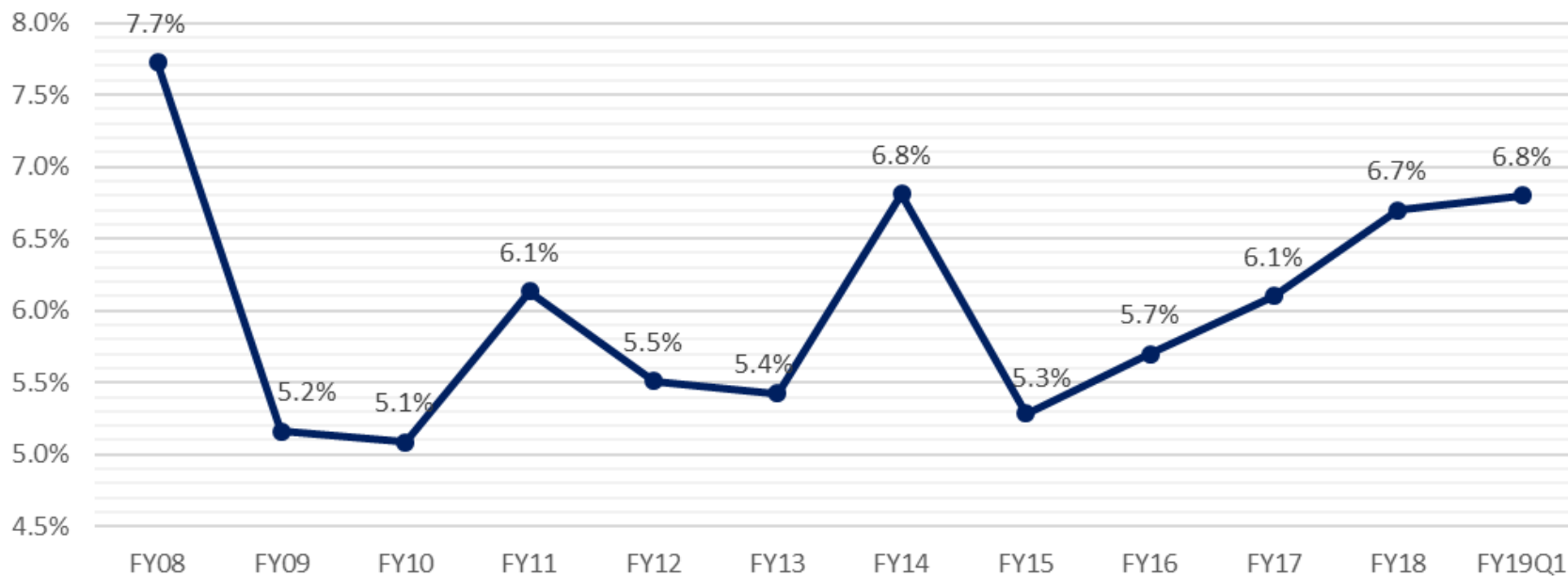
As of 31 Dec 2018



Attrition Rates



Engineering Attrition

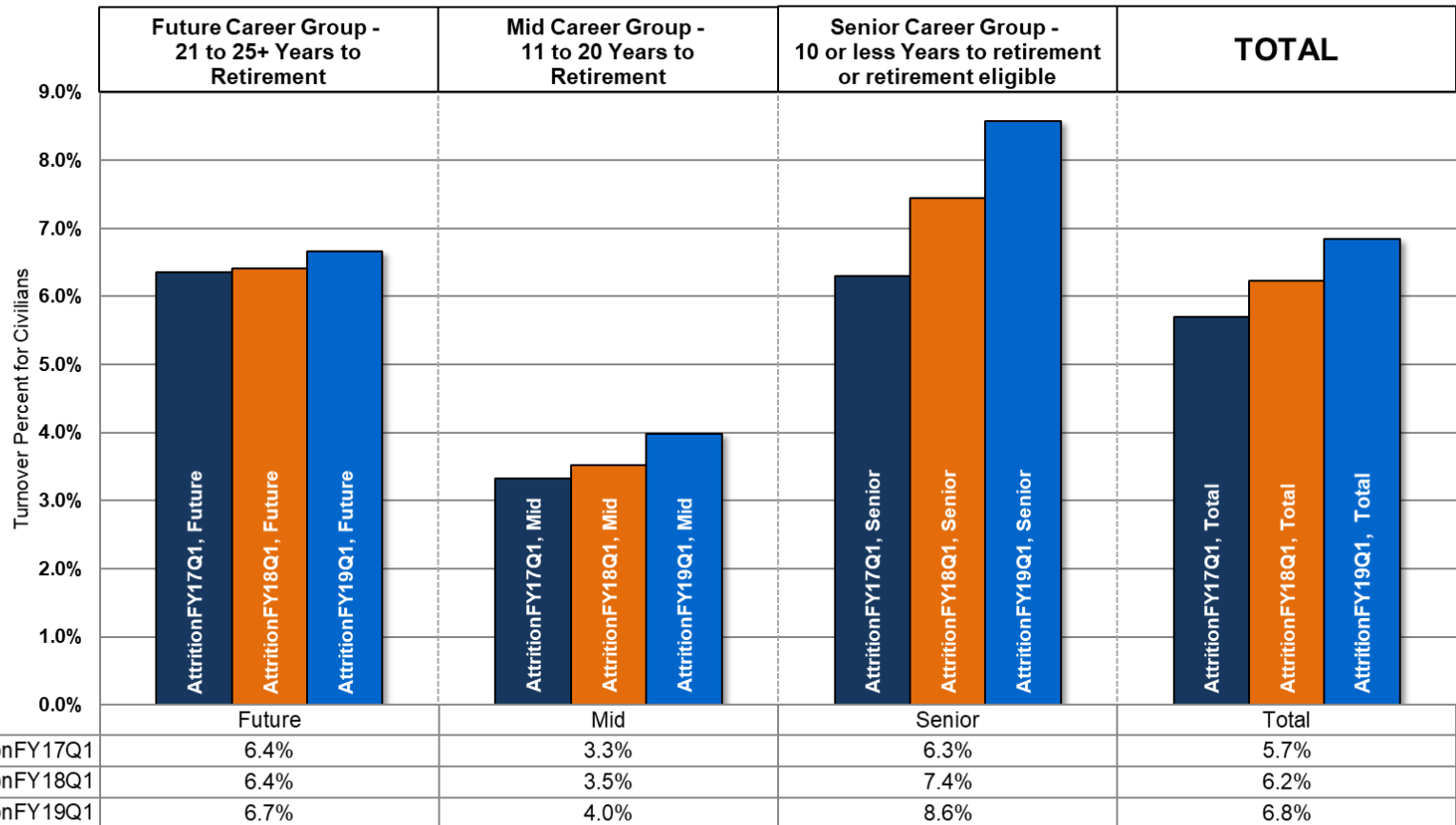


*FY19Q1 attrition rate is from the end of FY18Q1 through FY19Q1



Engineering Attrition Rates by Career Group

Defense Acquisition Workforce Attrition, (Civilian) (FY17Q1, FY18Q1, FY19Q1)(by Career Lifecycle Group)

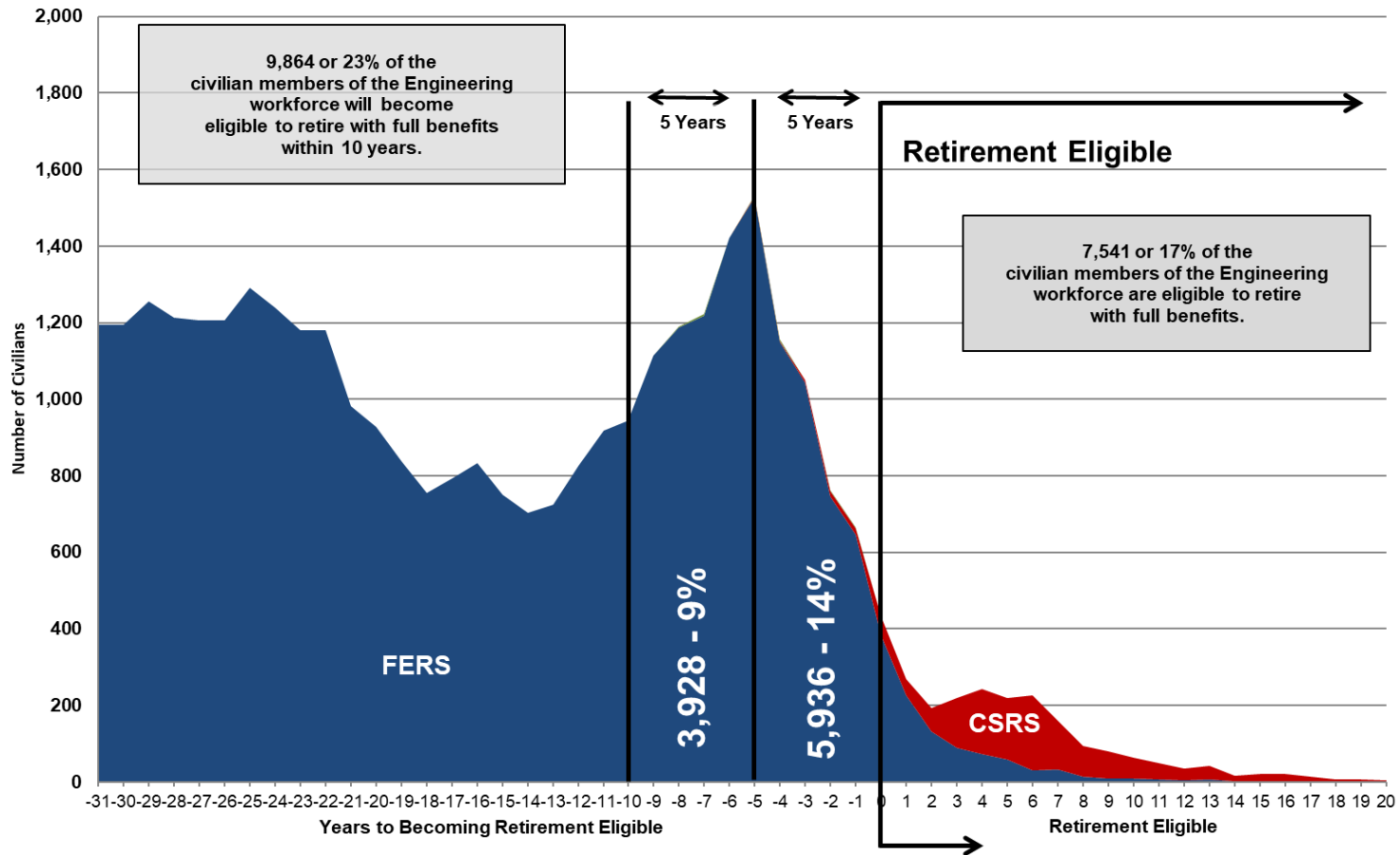




Engineering Civilian Distribution by Years to Retirement Eligibility



Defense Acquisition Workforce Distribution by Years to Retirement Eligibility (Civilians)(FY2019Q1)



As of 31 Dec 2018



END