



Defense Acquisition Workforce Key Information

Engineering

As of FY18 (30 Sept 2018)



Fact Sheet



Human Capital Fact Sheet

Defense Acquisition Workforce Engineering	FY 2008				FY2018Q4			
	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	43,355	1,495	44,850	172,736
Change in size from 2008	-	-	-	-	34%	-29%	30%	37%
Civilian/Military Composition	94%	6%	-	88% / 12%	97%	3%	-	91% / 9%
Educational Attainment								
Bachelor's Degree or Higher	98%	95%	98%	77%	98%	98%	98%	84%
Graduate Degree	36%	45%	36%	29%	41%	62%	41%	40%
Certification								
Level I or Higher Achieved	78%	57%	77%	72%	87%	78%	87%	84%
Level II or Higher Achieved	70%	25%	68%	61%	72%	49%	71%	71%
Level III Achieved	58%	8%	55%	36%	51%	21%	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%	37%	18%	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	45
Workforce Life-Cycle Model (YRE)* % Future/Mid-Career/Senior	27/24/49(%)	-	-	20/23/57 (%)(Civ)	36/23/41(%)	-	-	26/26/48(%)
Average Years of Service	17	9	16	17	15	9	15	15
Retirement Eligible*	3,965(12%)	-	-	19,051(17%) (Civ)	7,746(18%)	-	-	28,432(18%)
Retirement Eligible w/in 5 Years*	4,804(15%)	-	-	21,315(19%) (Civ)	5,981(14%)	-	-	25,048(16%)
Total Gains/Losses*	4,050/4,197	-	-	14,245/15,030 (Civ)	5,060/3,369	-	-	19,614/12,308

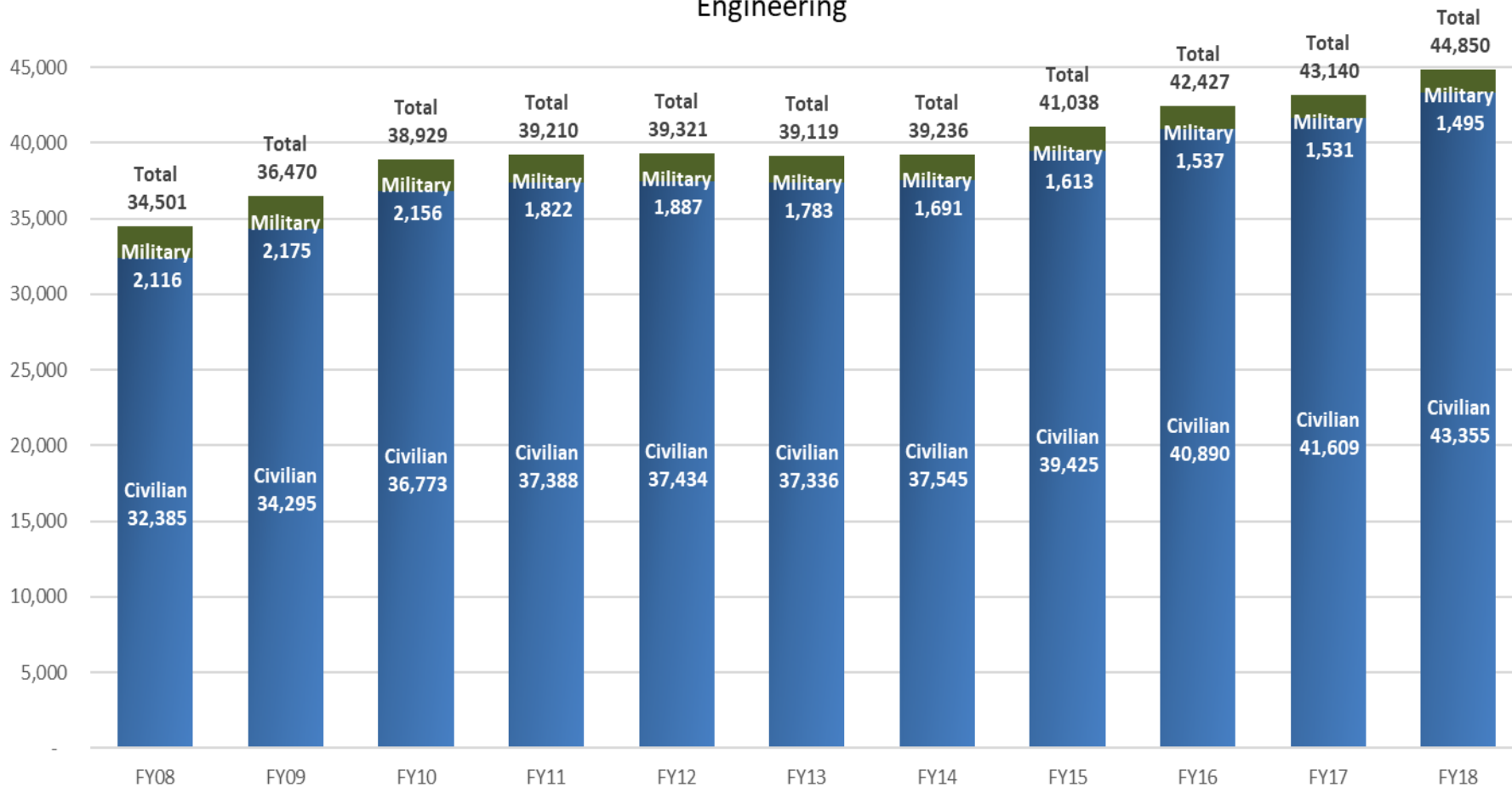
Source: Data generated by OUSD(A&S)/Human Capital Initiatives using the A&S Workforce Data Mart & analysis support from RAND.



Engineering Total Workforce

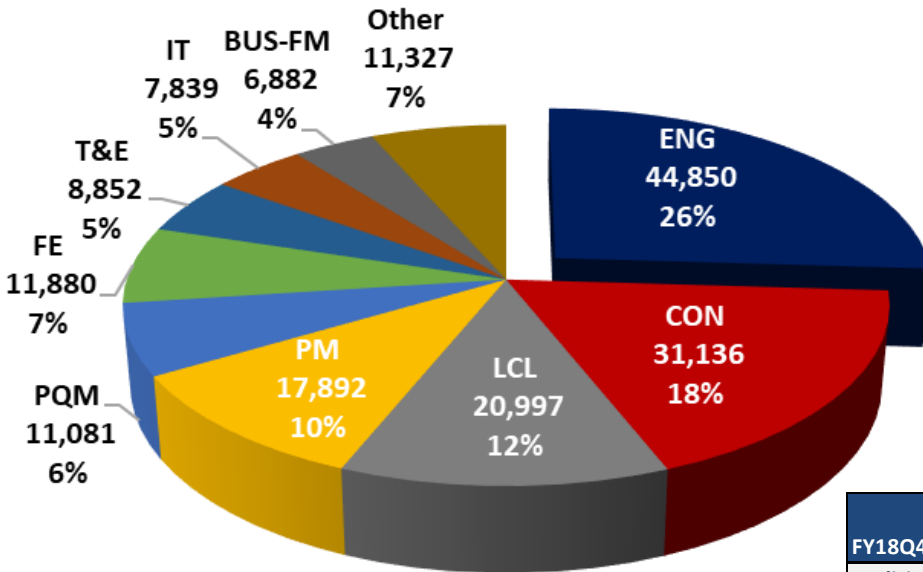


Engineering





AWF by Component and Career Field



FY18Q4	Army	Navy	Marine Corps	Air Force	4th Estate	Totals	% Total
Auditing	-	-	-	-	4,219	4,219	2.4%
Business - CE	237	562	35	526	89	1,449	0.8%
Business - FM	1,768	2,156	174	2,200	584	6,882	4.0%
Contracting	8,007	6,234	533	8,250	8,112	31,136	18.0%
Engineering	9,160	23,678	336	9,535	2,141	44,850	26.0%
Facilities Engineering	5,329	5,755	33	668	95	11,880	6.9%
Information Technology	1,784	3,352	225	1,392	1,086	7,839	4.5%
Life Cycle Logistics	6,912	6,344	644	3,662	3,435	20,997	12.2%
Production, Quality and Man	1,373	3,755	41	451	5,461	11,081	6.4%
Program Management	3,363	5,619	758	6,253	1,899	17,892	10.4%
Property	50	69	-	16	260	395	0.2%
Purchasing	315	386	39	48	472	1,260	0.7%
S&T Manager	503	507	3	2,841	132	3,986	2.3%
Small Business	-	-	-	-	-	-	0.0%
Test and Evaluation	1,909	3,276	130	3,184	353	8,852	5.1%
Unknown/Other	8	3	1	1	5	18	0.01%
Totals	40,718	61,696	2,952	39,027	28,343	172,736	
Component %	23.6%	35.7%	1.7%	22.6%	16.4%		



Engineering Workforce Historical Size by Agency FY08 – FY18



Engineering Defense Acq Workforce Agency	FY08	FY10	FY12	FY14	FY16	FY17	FY18	% Change Since FY08	% Change Since FY17
Navy	16,353	18,932	19,121	19,423	21,623	22,297	23,678	45%	6%
MARINE CORPS	223	338	377	374	354	341	336	51%	-1%
AIR FORCE	6,429	7,625	8,649	8,473	9,139	9,276	9,535	48%	3%
ARMY	10,769	10,644	9,810	8,981	9,140	9,096	9,160	-15%	1%
DCMA	282	813	974	1,157	1,271	1,229	1,238	339%	1%
MDA	281	623	644	605	601	603	604	115%	0%
DISA	89	58	69	74	70	66	89	0%	35%
NRO	-	-	-	-	66	78	64		-18%
DAU	33	46	49	40	45	43	48	45%	12%
DTRA	7	27	35	44	47	35	21	200%	-40%
DMEA	-	29	23	20	32	31	27		-13%
OSD	31	25	21	23	22	22	16	-48%	-27%
DLA	19	16	11	11	13	14	12	-37%	-14%
DHA	2	9	10	6	4	8	9	350%	13%
JCS	-	-	12	10	7	6	8		33%
DeCA	-	-	-	-	3	3	4		33%
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	43,149	44,850	↑ 30%	↑ 4%



Engineering Workforce Historical Size (Quarterly) by Agency FY16Q4 – FY18Q4



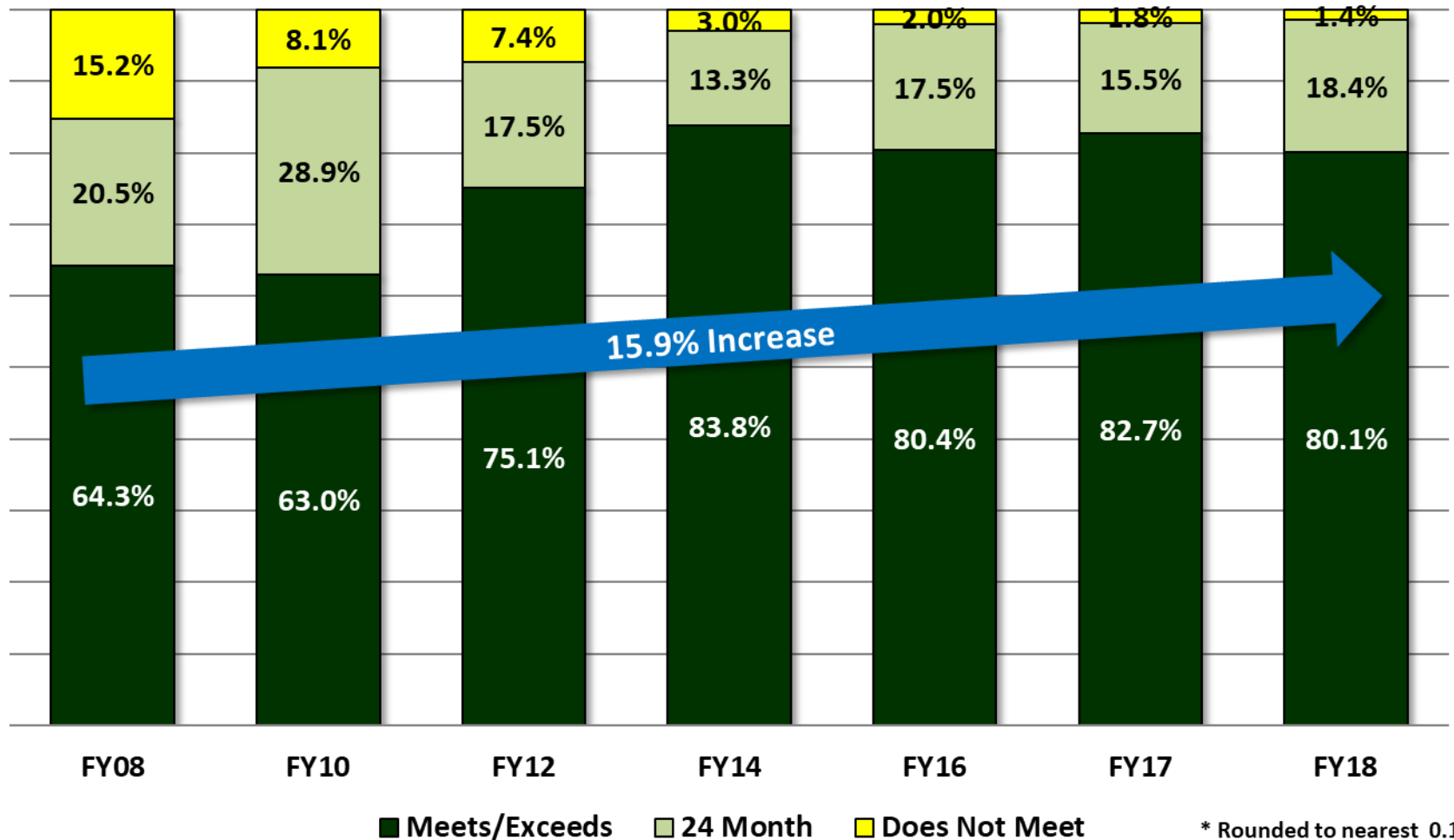
Engineering Defense Acq Workforce Agency	FY16Q4	FY17Q1	FY17Q2	FY17Q3	FY17Q4	FY18Q1	FY18Q2	FY18Q3	FY18Q4	% Change Since FY17Q4
Navy	21,623	21,652	21,668	21,777	22,297	22,276	22,376	22,726	23,678	6%
MARINE CORPS	354	355	353	357	341	339	336	342	336	-1%
AIR FORCE	9,139	9,126	9,221	9,211	9,276	9,178	9,271	9,385	9,535	3%
ARMY	9,140	9,145	9,122	9,008	9,096	9,084	9,060	9,024	9,160	1%
DCMA	1,271	1,275	1,262	1,239	1,229	1,226	1,231	1,220	1,238	1%
MDA	601	600	597	605	603	597	594	594	604	0%
DISA	70	73	73	72	66	68	66	68	89	35%
NRO	66	68	72	75	78	78	72	56	64	-18%
DAU	45	44	44	46	43	46	47	48	48	12%
DTRA	47	43	42	39	35	31	30	30	21	-40%
DMEA	32	31	31	31	31	32	31	29	27	-13%
OSD	22	22	22	23	22	22	22	21	16	-27%
DLA	13	13	12	13	14	14	14	15	12	-14%
DHA	4	4	4	6	8	8	9	9	9	13%
JCS	7	7	7	7	6	6	8	7	8	33%
DeCA	3	3	2	1	3	4	4	5	4	33%
TRMC	1	1	1	1	1	1	1	1	1	0%
TOTAL	42,438	42,462	42,533	42,511	43,149	43,010	43,172	43,580	44,850	↑ 4%



Engineering Manager Historical DAWIA Certification FY08 – FY18



Engineering

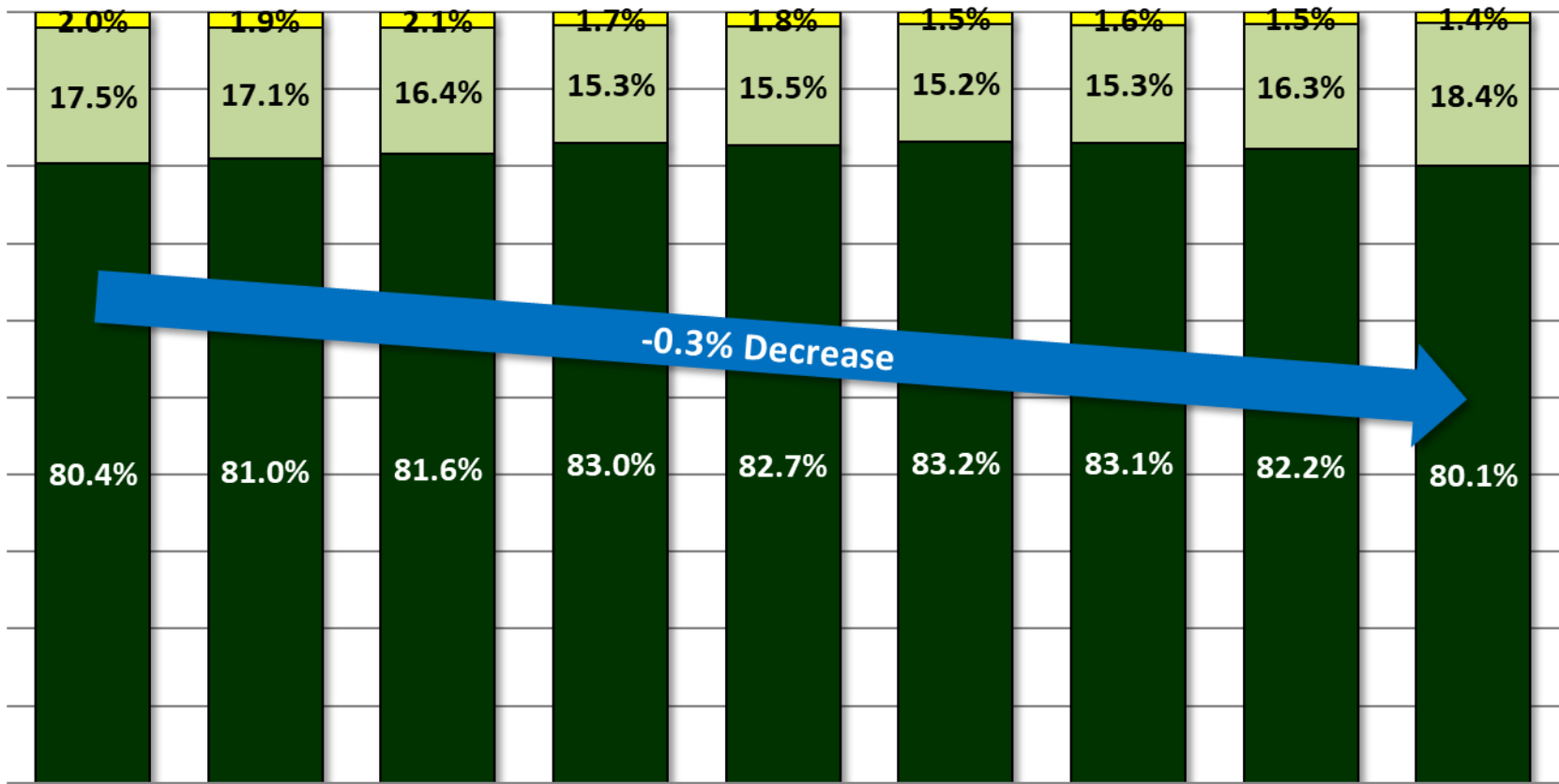




Engineering Manager Historical (Quarterly) DAWIA Certification FY16Q4 – FY18Q4



Engineering



-0.3% Decrease

■ Meets/Exceeds ■ 24 Month ■ Does Not Meet

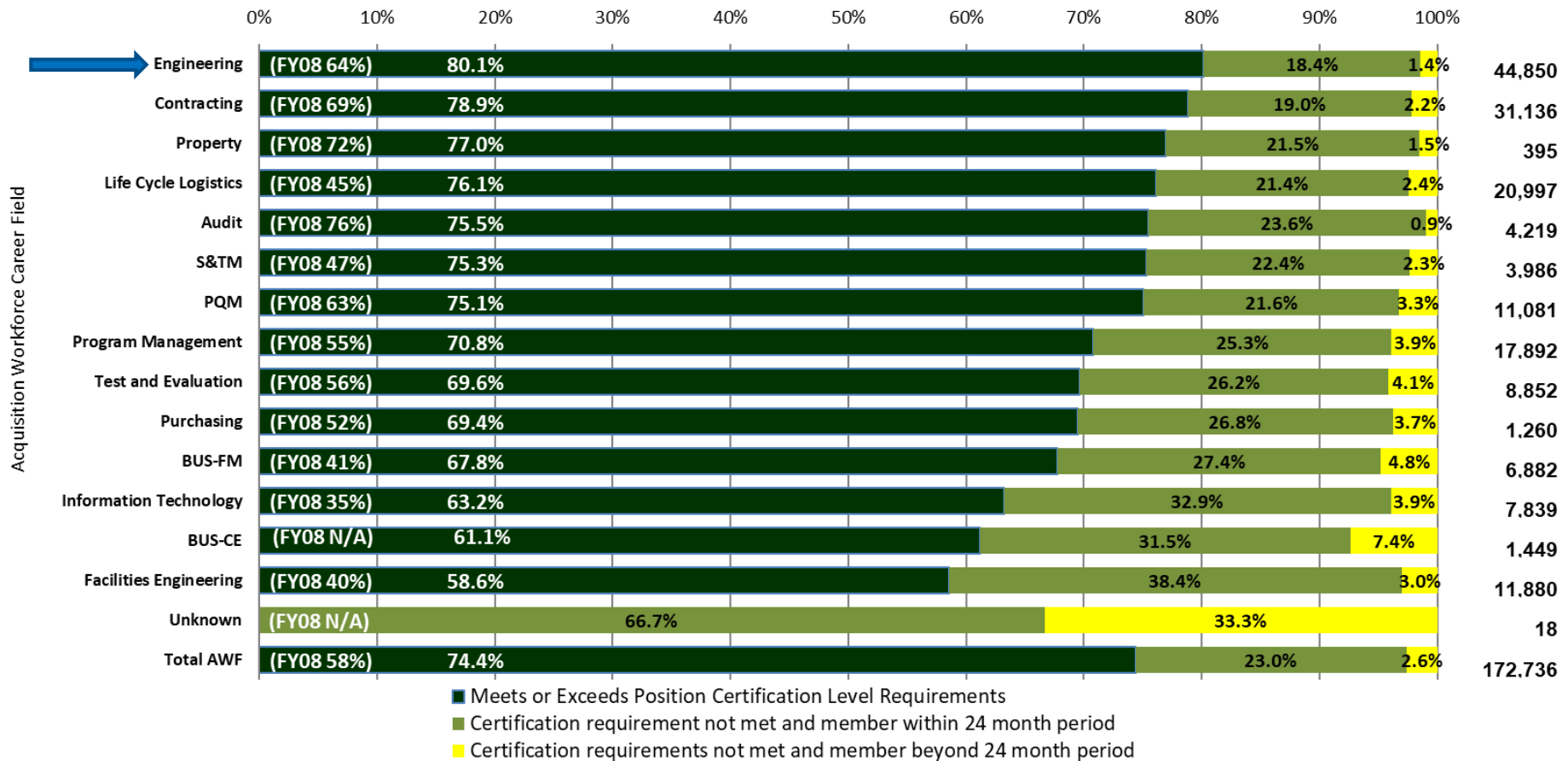
* Rounded to nearest 0.1%



DAWIA Certification by Career Field



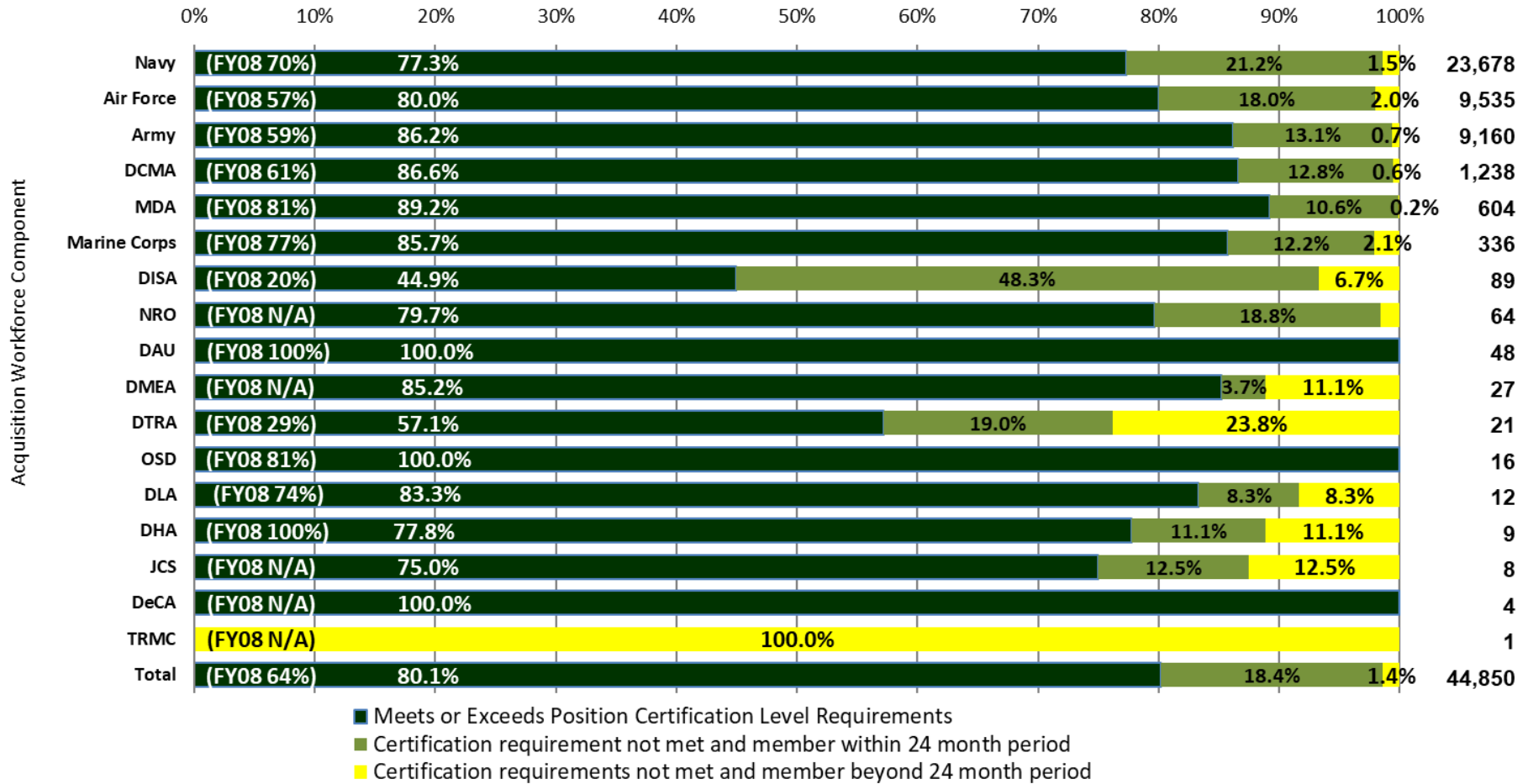
Certification Level "Meet/Exceed" Rates by Career Field AWF (FY18Q4)





Engineering DAWIA Certification by Component

Certification Level "Meet/Exceed" Rates by Component Engineering (FY18Q4)



- 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 Matrix + Bench Strength

Engineering	Achieved Certification Level				FY18Q4 TOTAL	% Meets Certification Requirement
Required Certification Level	No Level Achieved	Level I	Level II	Level III		
Level I	3,791	4,697	1,607	1,698	11,793	67.9%
Level II	1,727	1,897	7,073	7,159	17,856	79.7%
Level III	533	306	652	13,706	15,197	90.2%
Unspecified	-	1	-	3	4	
FY18Q4 TOTAL	6,051	6,901	9,332	22,566	44,850	80.1%
	13.5%	15.4%	20.8%	50.3%		

No Level Achieved includes those within the 24 month grace period

Bench Strength			
Org	# Meet or Exceeds	% Meets or Exceeds*	Career Field Rank
DAW	128,466	74.4%	
Army	31,625	77.7%	
Navy	45,031	73.0%	
Marine Cor	2,016	68.3%	
Air Force	27,549	70.6%	
4th Estate	22,245	78.5%	
Engineering	35,940	80.1%	1 of 14

** Based on population total without unspecified positions

Certification Requirement	Meets	Within 24 Months	Does Not Meet	DAW TOTAL	
Level I	8,002	3,751	40	11,793	26.3%
Level II	14,232	3,216	408	17,856	39.8%
Level III	13,706	1,303	188	15,197	33.9%
Unspecified	3	1	-	4	0.0%
Engineering TOTAL	35,943	8,271	636	44,850	
	80.1%	18.4%	1.4%		

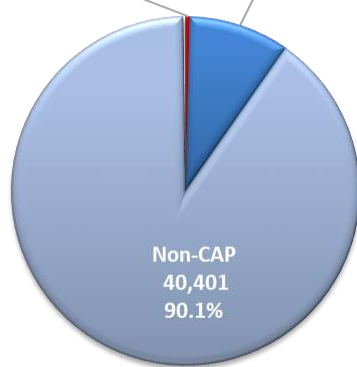
 = Compliance
 = Exceeds Requirements

* NOTE: Rounded to nearest 0.1%

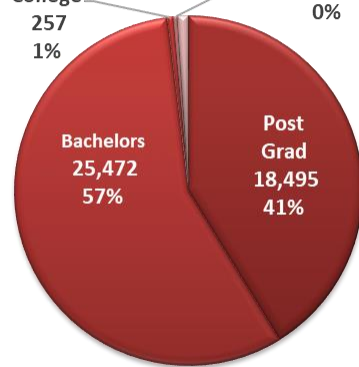


Demographics

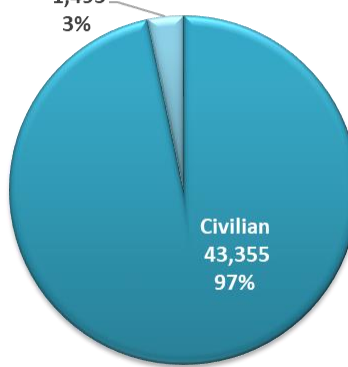
KLP 168 0.4%
CAP - KLP 4,185 9.3%
CAP 4,185 9.3%



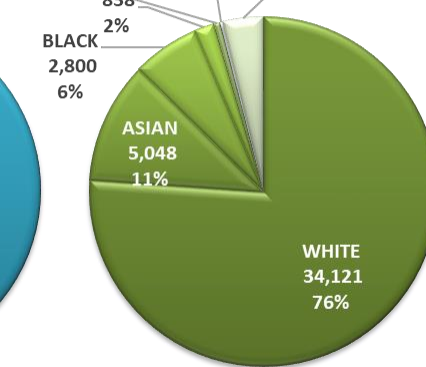
Some College 257 1%
High School 173 0%
Bachelors 25,472 57%
Post Grad 18,495 41%



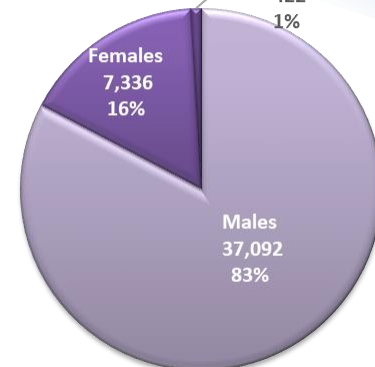
MIL / CIV
Military 1,495 3%
Civilian 43,355 97%



AMI/AN 247 0.6%
MULTI 838 2%
BLACK 2,800 6%
ASIAN 5,048 11%
PI 123 0%
Unspecified 1,673 4%
WHITE 34,121 76%



Gender
Unspecified 422 1%
Females 7,336 16%
Males 37,092 83%



Occupied Position Type	Engineering	Entire DAW
Key Leadership Positions (KLPs)	168 0.4%	1,178 0.7%
Critical Acquisition Positions (CAPs) *	4,185 9.3%	16,515 9.6%
Non-CAP Positions	40,401 90.1%	154,442 89.4%
Unknown	96 0.2%	601 0.3%
TOTAL	44,850	172,736

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

Highest Level of Education	Engineering	Entire DAW
Post Grad	18,495 41.2%	68,976 39.9%
Bachelors	25,472 56.8%	76,511 44.3%
Some College	257 0.6%	12,143 7.0%
High School	173 0.4%	12,696 7.3%
Other	453 1.0%	2,410 1.4%
TOTAL	44,850	172,736

Military / Civilian	Engineering	Entire DAW
Civilian	43,355 96.7%	157,318 91.1%
Military	1,495 3.3%	15,418 8.9%
TOTAL	44,850	172,736

Race	Engineering	Entire DAW
WHITE	34,121 76.1%	126,389 73.2%
ASIAN	5,048 11.3%	20,741 12.0%
BLACK	2,800 6.2%	11,803 6.8%
MULTI	838 1.9%	4,768 2.8%
AMI/AN	247 0.6%	1,073 0.6%
PI	123 0.3%	862 0.5%
Unspecified	1,673 3.7%	7,100 4.1%
TOTAL	44,850	172,736

Gender	Engineering	Entire DAW
Males	37,092 82.7%	121,073 70.1%
Females	7,336 16.4%	49,817 28.8%
Unspecified	422 0.9%	1,846 1.1%
TOTAL	44,850	172,736



Engineering Size by Occupational Series

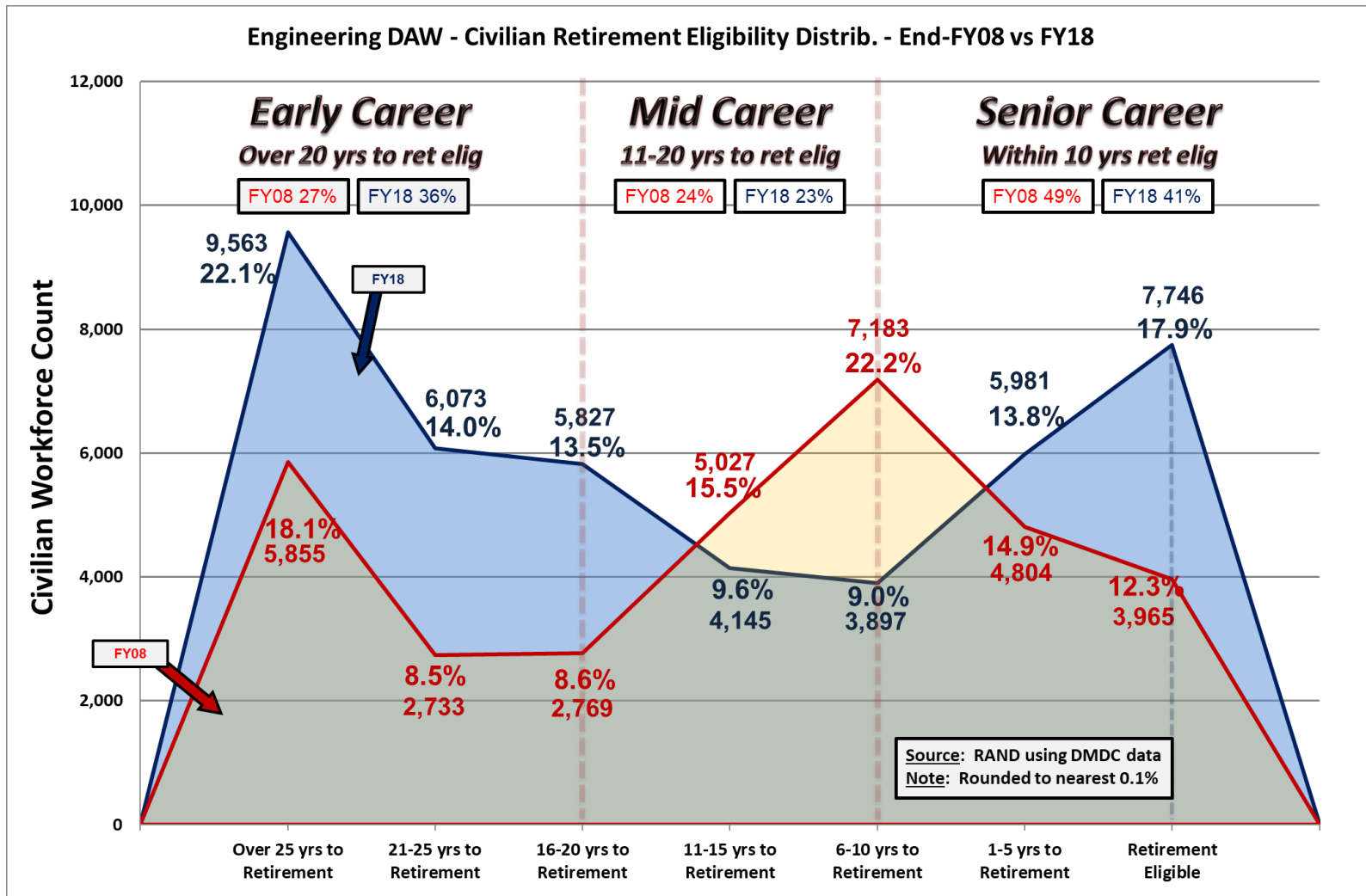
Civilian Occupational Series	Engineering	
0855 - Engineer, Electronics	10,599	24.4%
0801 - Engineer, General	8,744	20.2%
0830 - Engineer, Mechanical	6,913	15.9%
0861 - Engineer, Aerospace	3,091	7.13%
0854 - Engineer, Computers	2,732	6.30%
0850 - Engineer, Electrical	1,764	4.07%
1550 - Computer Scientist	4,345	10.02%
1515 - Operations Research Analyst	685	1.58%
1310 - Physicist	639	1.47%
0893 - Engineer, Chemical	517	1.19%
<i>Other</i>	3,326	7.67%
TOTAL CIVILIAN	43,355	Civilians



RAND NDRI Forces and Resources Policy Center Data Retirement / Loss Slides FY18



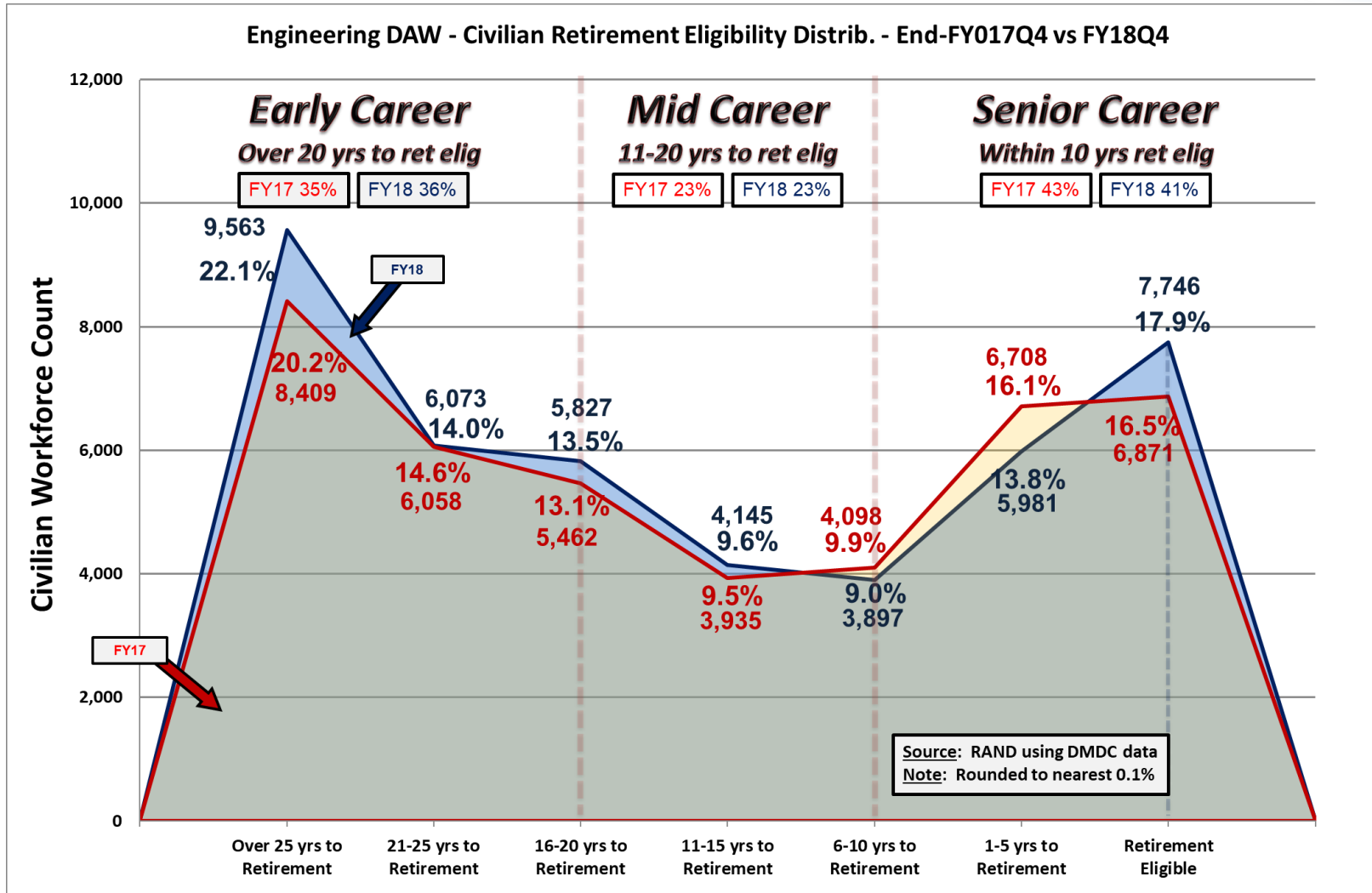
Engineering Civilian Retirement Eligibility Distribution – FY08 / FY18



As of 30 Sept 2018



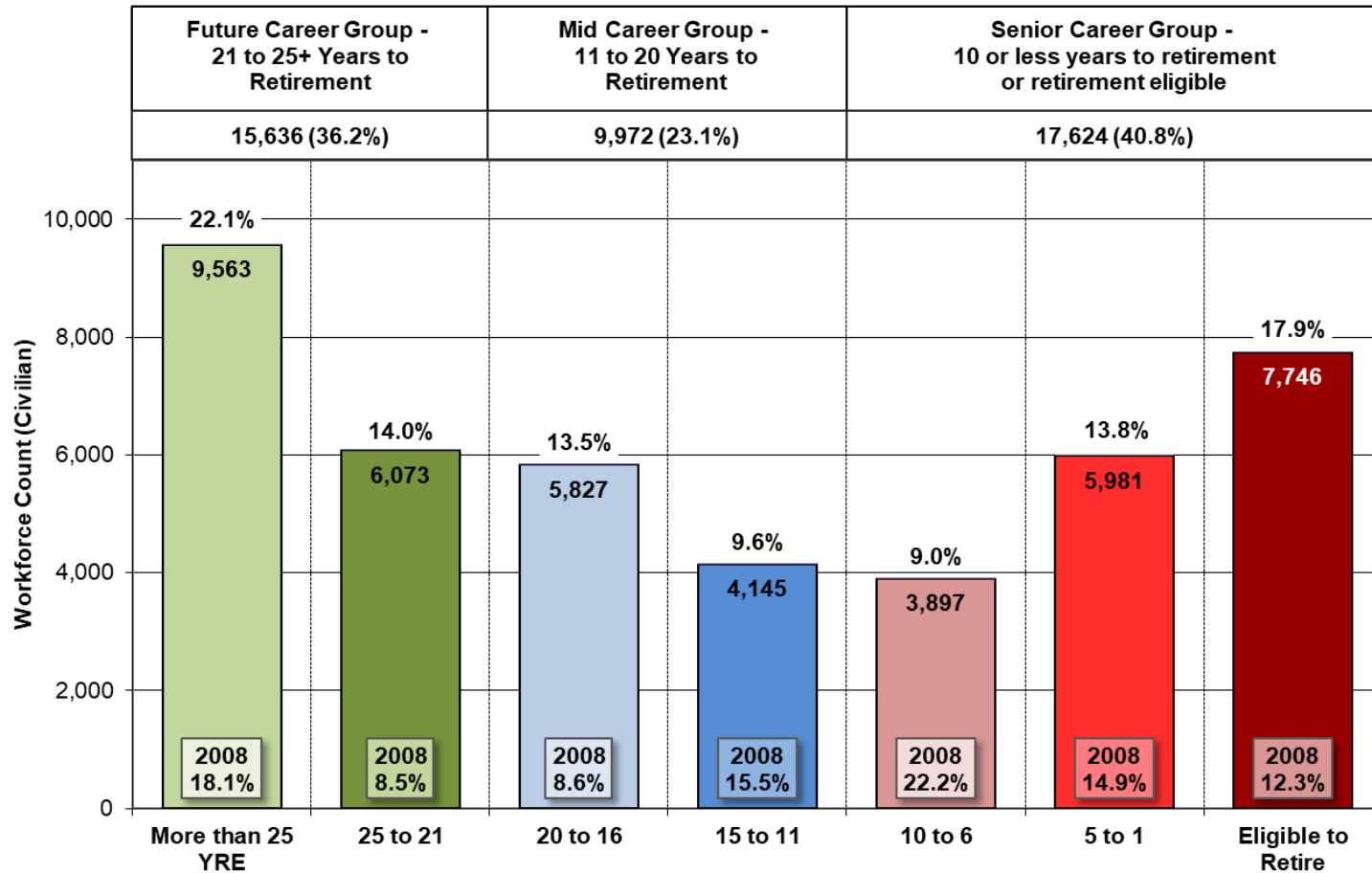
Engineering Civilian Retirement Eligibility Distribution – (1 year) FY17Q4 / FY18Q4





Engineering Workforce Lifecycle Model by YRE

Defense Acquisition Workforce Lifecycle Model (WLM) by Years to Retirement Eligibility (YRE) - Civilian (FY2018Q4)



As of 30 Sept 2018

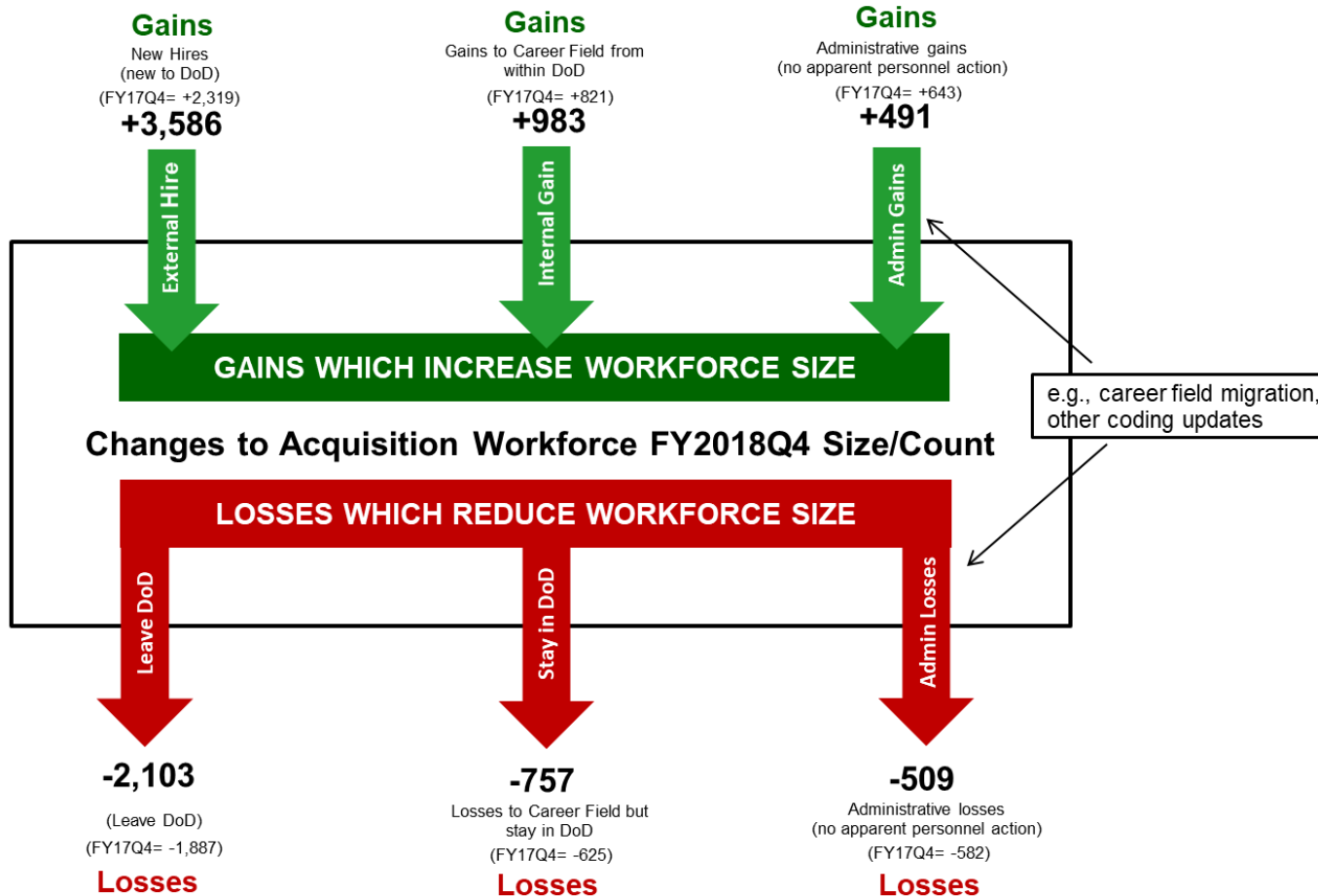


Engineering Gains/Losses – New Hires Internal/External, Administrative



Defense Acquisition Workforce (Civilian) (FY2018Q4)

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

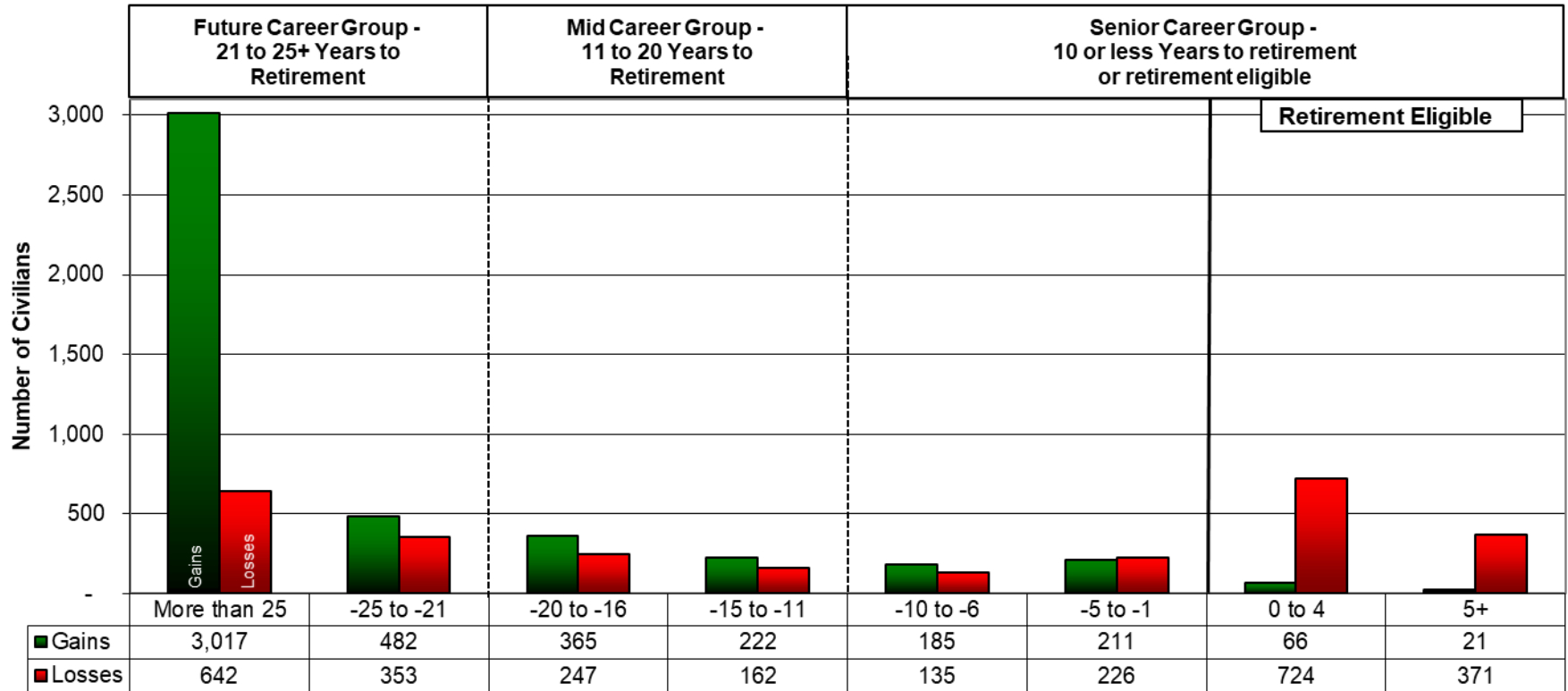




Engineering Gains and Losses by YRE Groups

Defense Acquisition Workforce (Civilian)

Workforce Lifecycle FY2018Q4 Gains & Losses*

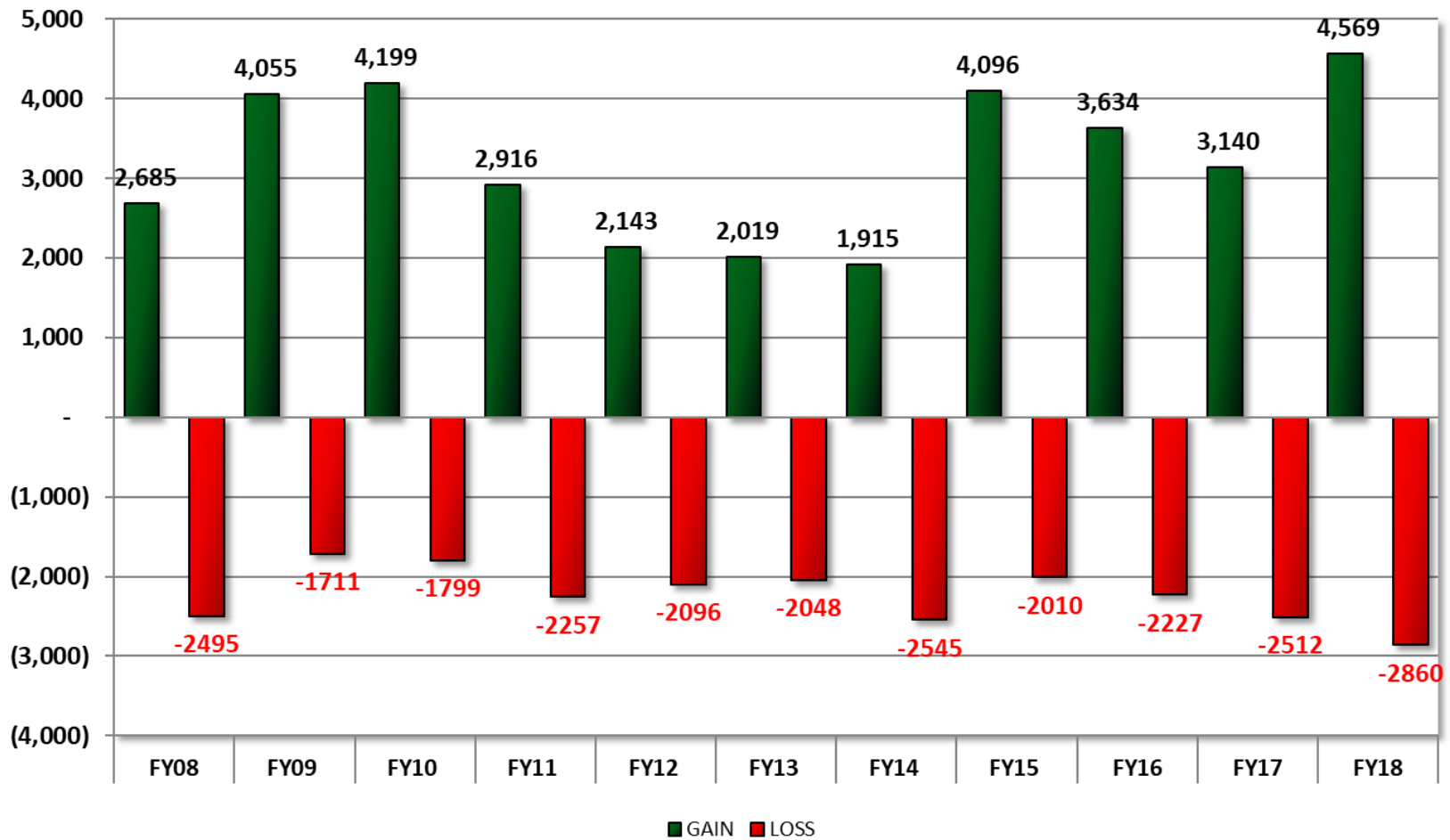


Career Lifecycle by Years to Retirement Eligibility

*Does not include administrative gains and losses



Engineering Historical Gains and Losses FY08 – FY18



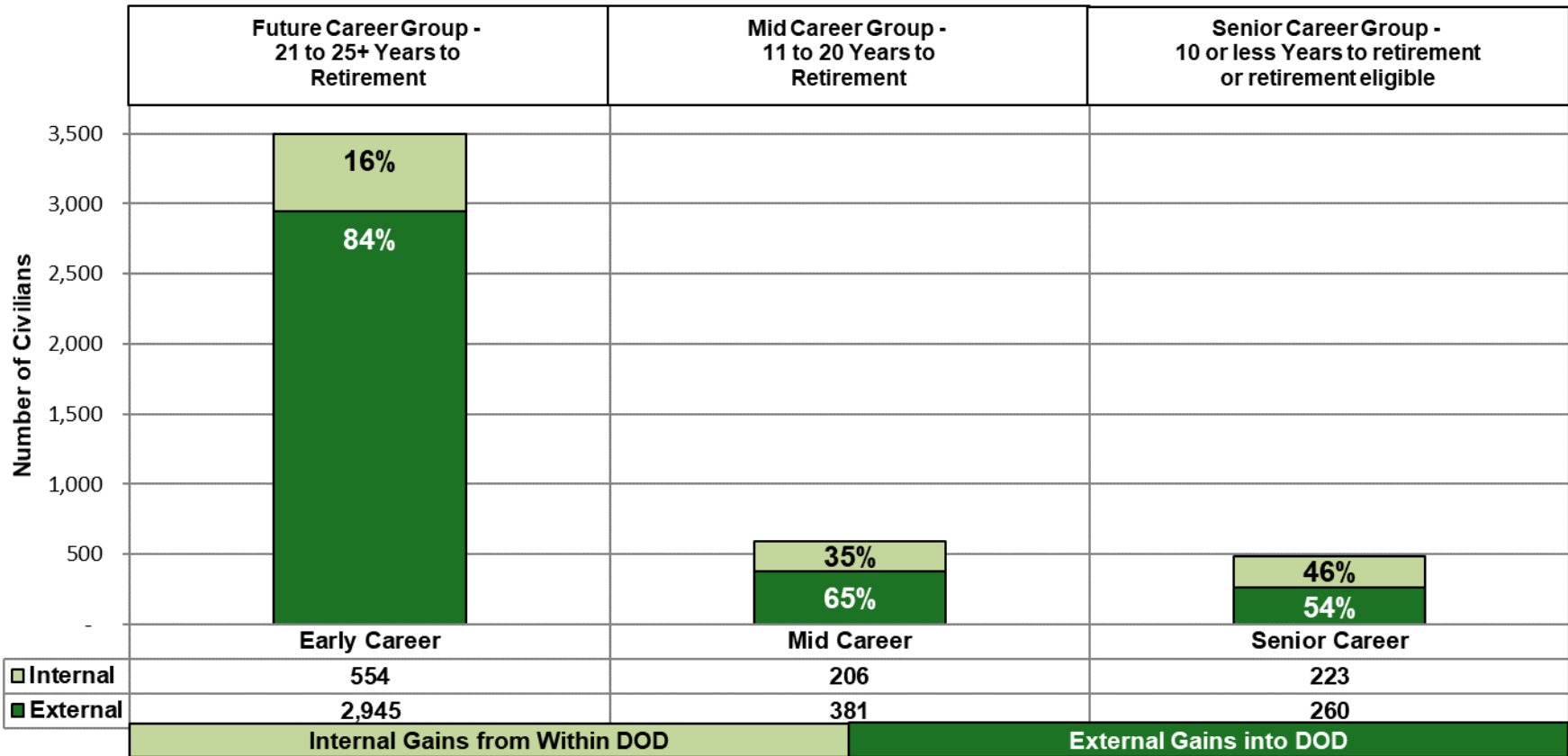
As of 30 Sept 2018



Engineering Internal/External Gains % by Career Group



Defense Acquisition Workforce (Civilian)
Workforce Lifecycle FY2018Q4 Gains*



*Does not include administrative gains

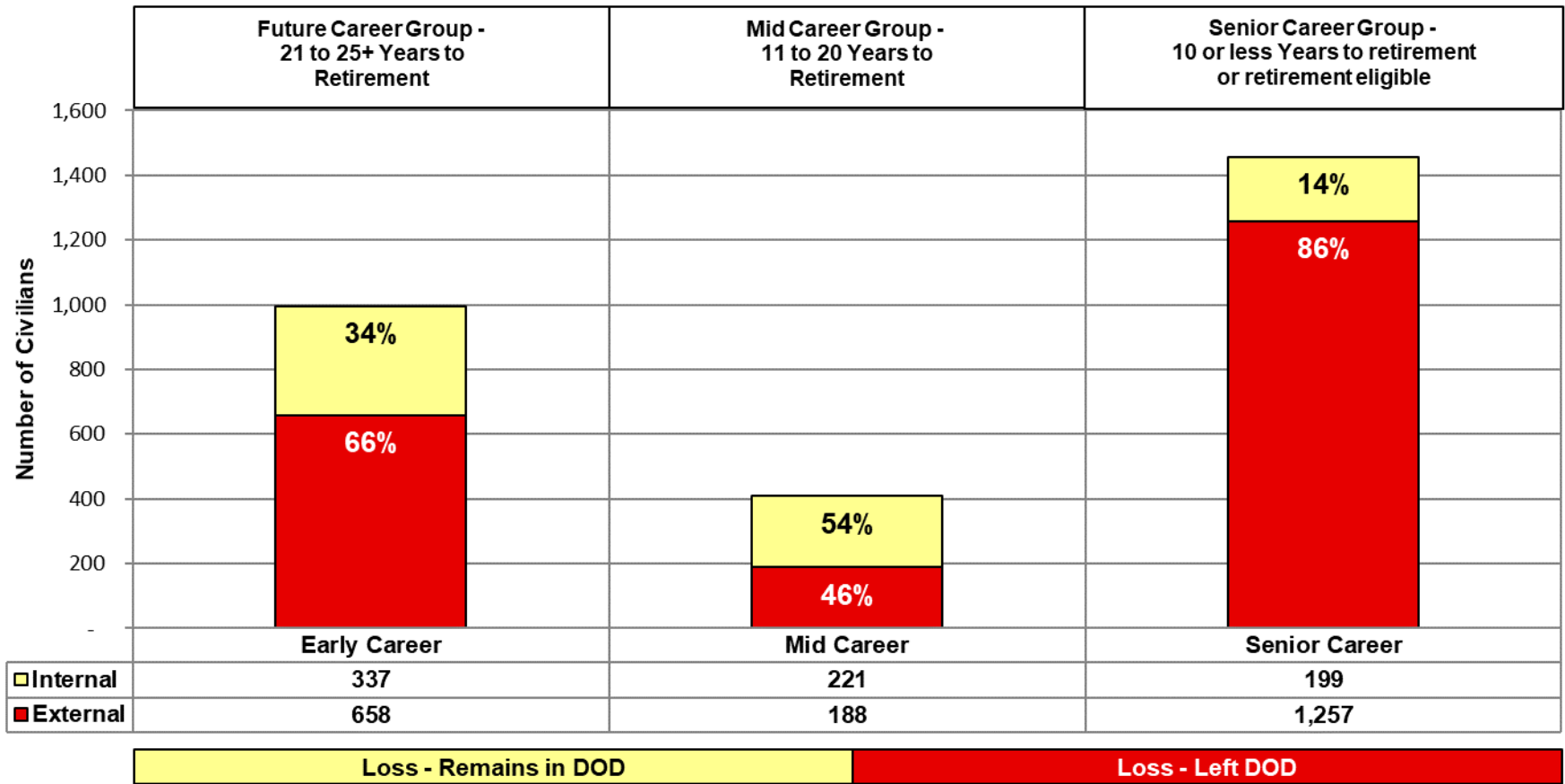


Engineering Internal/External Loss % by Career Group



Defense Acquisition Workforce (Civilian)

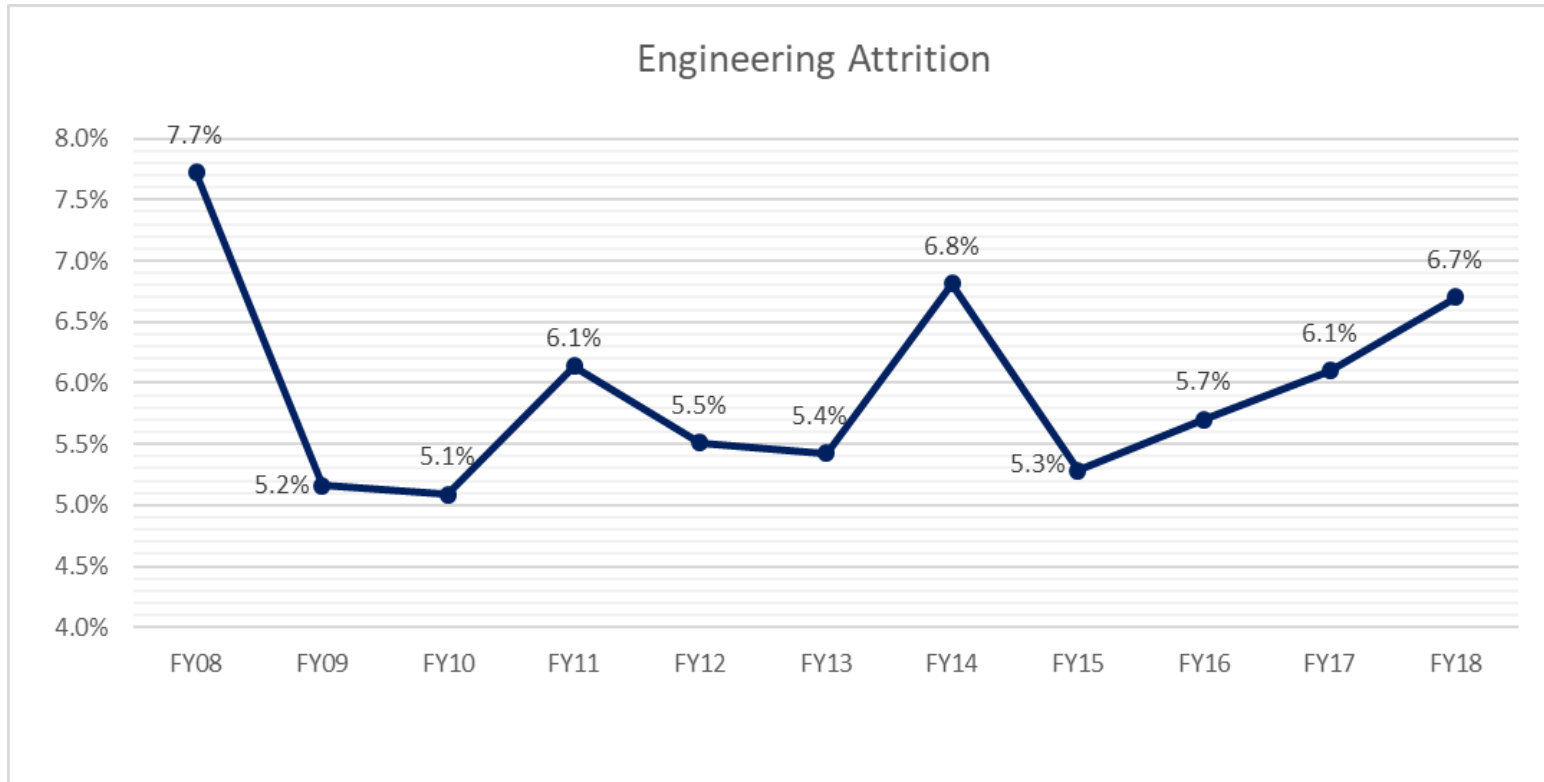
Workforce Lifecycle FY2018Q4 Losses*



*Does not include administrative losses



Attrition Rates

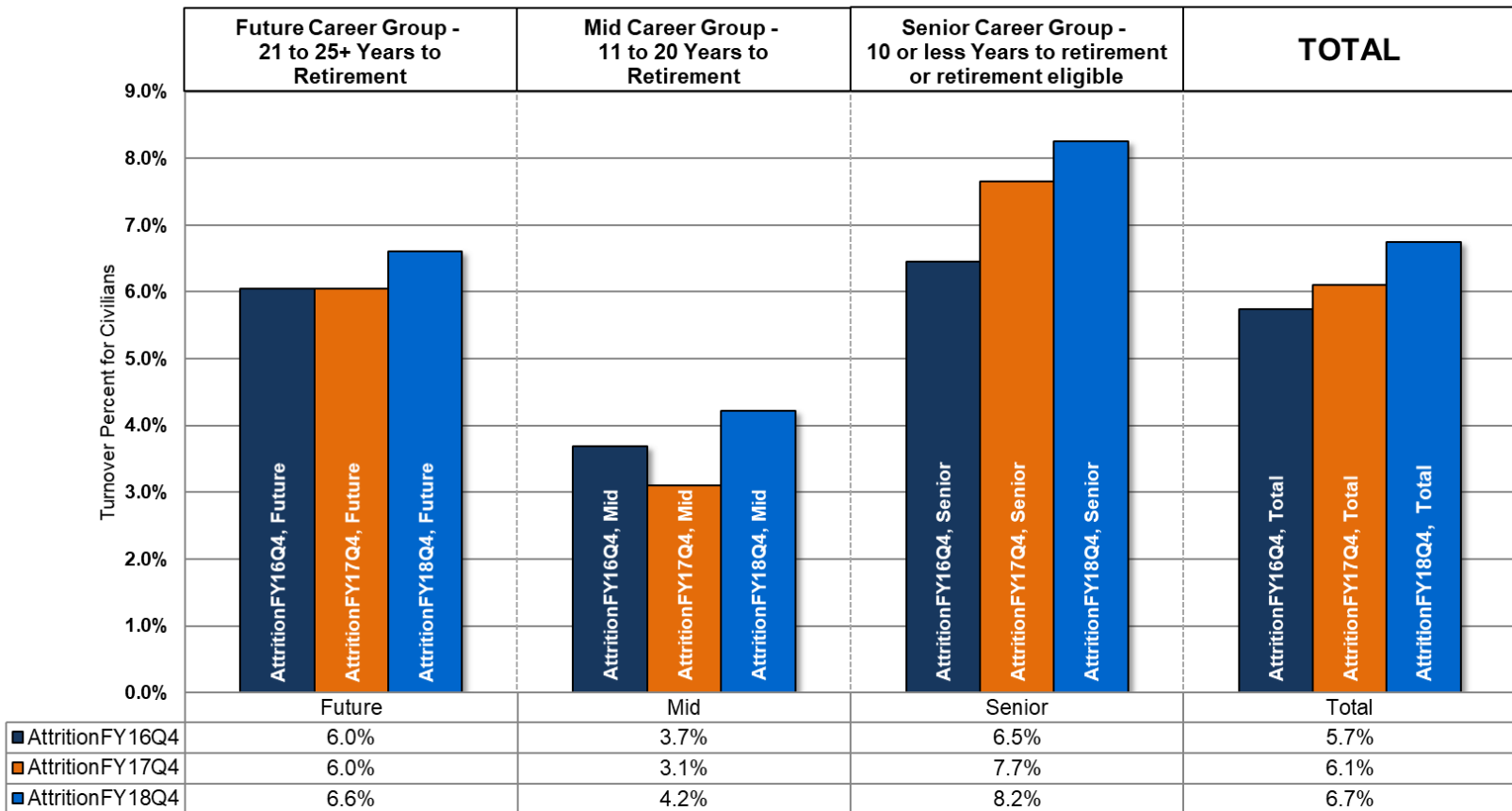


As of 30 Sept 2018



Engineering Attrition Rates by Career Group

**Defense Acquisition Workforce Attrition, (Civilian)
(FY16Q4, FY17Q4, FY18Q4)(by Career Lifecycle Group)**

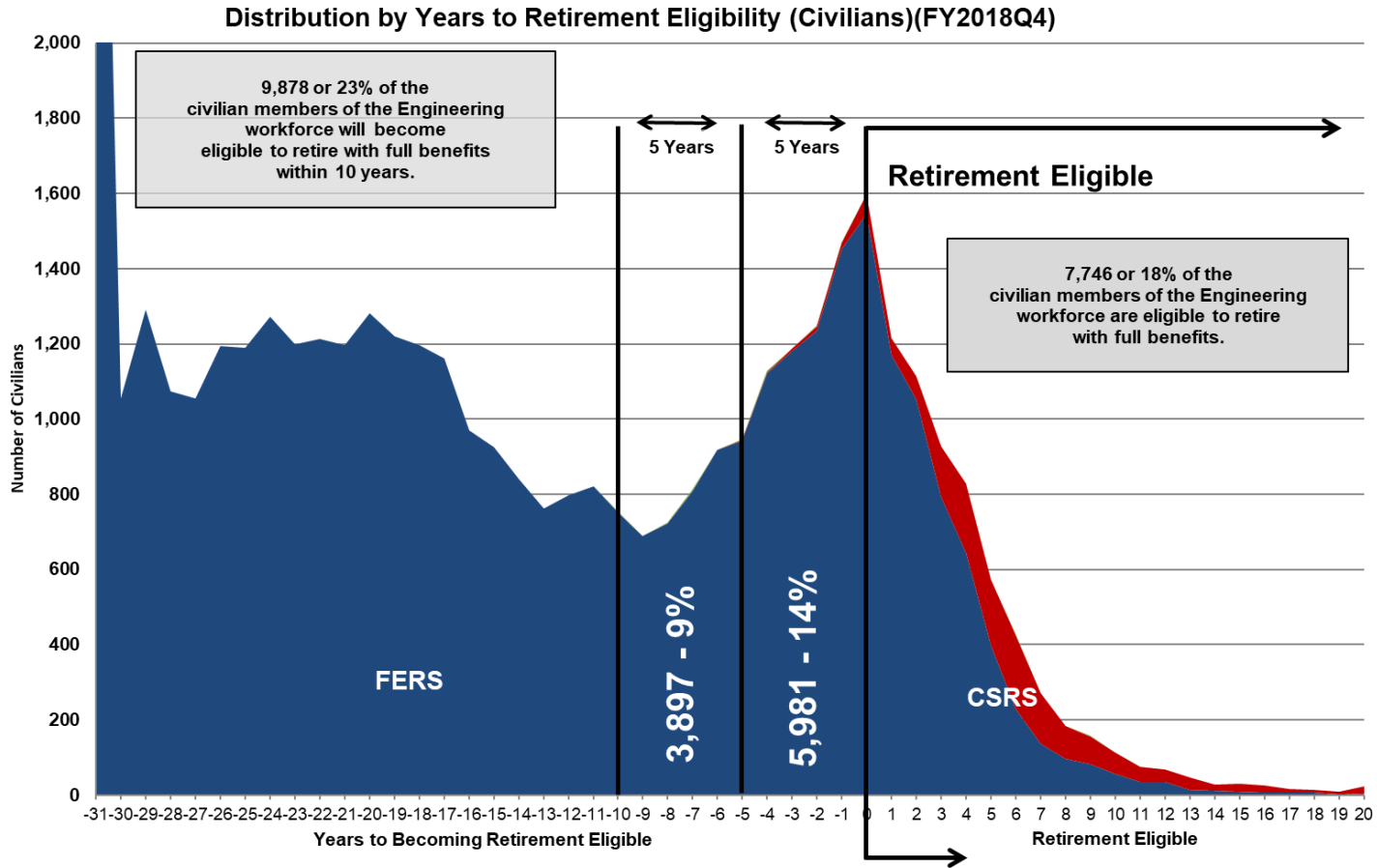




Engineering Civilian Distribution by Years to Retirement Eligibility



Defense Acquisition Workforce



As of 30 Sept 2018



END