



# Defense Acquisition Workforce Key Information

Engineering

As of FY16Q3 (30 Jun 2016)



# Overview



- AT&L HCI is committed to providing the Functional Leader and FIPT Executive Secretary up-to-date key workforce information on a quarterly basis – we welcome questions and recommendations for improved information and analysis support
- HCI provides defense acquisition workforce-wide updates online also at [http://hci.dau.mil/inf\\_sum.html](http://hci.dau.mil/inf_sum.html)
- Key HCI support contacts
  - **HCI Functional Leader/FIPT Liaison Mr. Bell Costa**
  - **HCI Data/Analysis**
    - **Mrs. Adrienne Evertson (adrienne.evertson@hci.mil)(703-805-2338)**



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# Fact Sheet



## Human Capital Fact Sheet

Defense Acquisition Workforce Engineering	FY 2008				FY2016Q3			
	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
<b>Size &amp; Composition</b>								
Workforce Size	32,385	2,116	34,501	125,879	39,824	1,575	41,399	158,508
Change in size from 2008	-	-	-	-	23%	-26%	20%	26%
Civilian/Military Composition	94%	6%	-	88% / 12%	96%	4%	-	90% / 10%
<b>Educational Attainment</b>								
Bachelor's Degree or Higher	98%	95%	98%	77%	98%	96%	98%	83%
Graduate Degree	36%	45%	36%	29%	41%	62%	42%	39%
<b>Certification</b>								
Level I or Higher Achieved	78%	57%	77%	72%	89%	80%	88%	85%
Level II or Higher Achieved	70%	25%	68%	61%	78%	54%	77%	74%
Level III Achieved	58%	8%	55%	36%	58%	22%	57%	43%
Position Certification Requirement Met or Exceeded	67%	31%	64%	58%	82%	63%	81%	76%
Within 24 Months of Certification Requirement	18%	52%	20%	27%	16%	33%	17%	21%
Does Not Meet Certification Requirement	15%	17%	15%	14%	2%	4%	2%	3%
<b>Planning Considerations</b>								
% Baby Boomer / Traditional Gen.	60%	8%	57%	62%	35%	1%	34%	36%
Average Age	44.6	32.5	43.8	45.7	43.6	31.6	43.1	44.6
Workforce Life-Cycle Model (YRE)* % Future/Mid-Career/Senior	27/24/49(%)	-	-	20/23/57 (%)(Civ)	33/22/46(%)	-	-	25/24/51(%)
Average Years of Service	16.7	8.9	16.2	17.3	15.4	9.1	15.2	15.2
Retirement Eligible*	3,965(12%)	-	-	19,051(17%) (Civ)	6,828(17%)	-	-	25,938(18%)
Retirement Eligible w/in 5 Years*	4,804(15%)	-	-	21,315(19%) (Civ)	7,067(18%)	-	-	26,095(18%)
Total Gains/Losses*	4,050/4,197	-	-	14,245/15,030 (Civ)	4,259/2,909	-	-	17,638/10,727

Source: The Human Capital Fact Sheet is based on end of FY2008 and FY2016Q3 data and was generated by OUSD(AT&L)/Human Capital Initiatives using the AT&L Workforce Data Mart.

\*Analysis support from RAND using FY2008 and FY2016Q3 DMDC data.



# Highlights



## Defense Acquisition Workforce Size Highlights

- The current Engineering Defense Acquisition Workforce count is 41,399, up from 34,537 in FY08, a total increase of 6,862
- The Engineering Defense Acquisition Workforce count was at its highest point 41,399 in FY16Q3, and its lowest point (34,537) in FY08
- The Agencies with the largest increases, since FY08, are NAVY, AIR FORCE, and DCMA, with increases of 4,973 (30%), 2,257 (35%), and 939 (333%), respectively
- The Agencies with the largest decreases, since FY08, are ARMY, DISA, and OSD, with decreases of 1,708 (-16%), 25 (-28%), and 9 (-29%), respectively

## Defense Acquisition Workforce DAWIA Certification Highlights

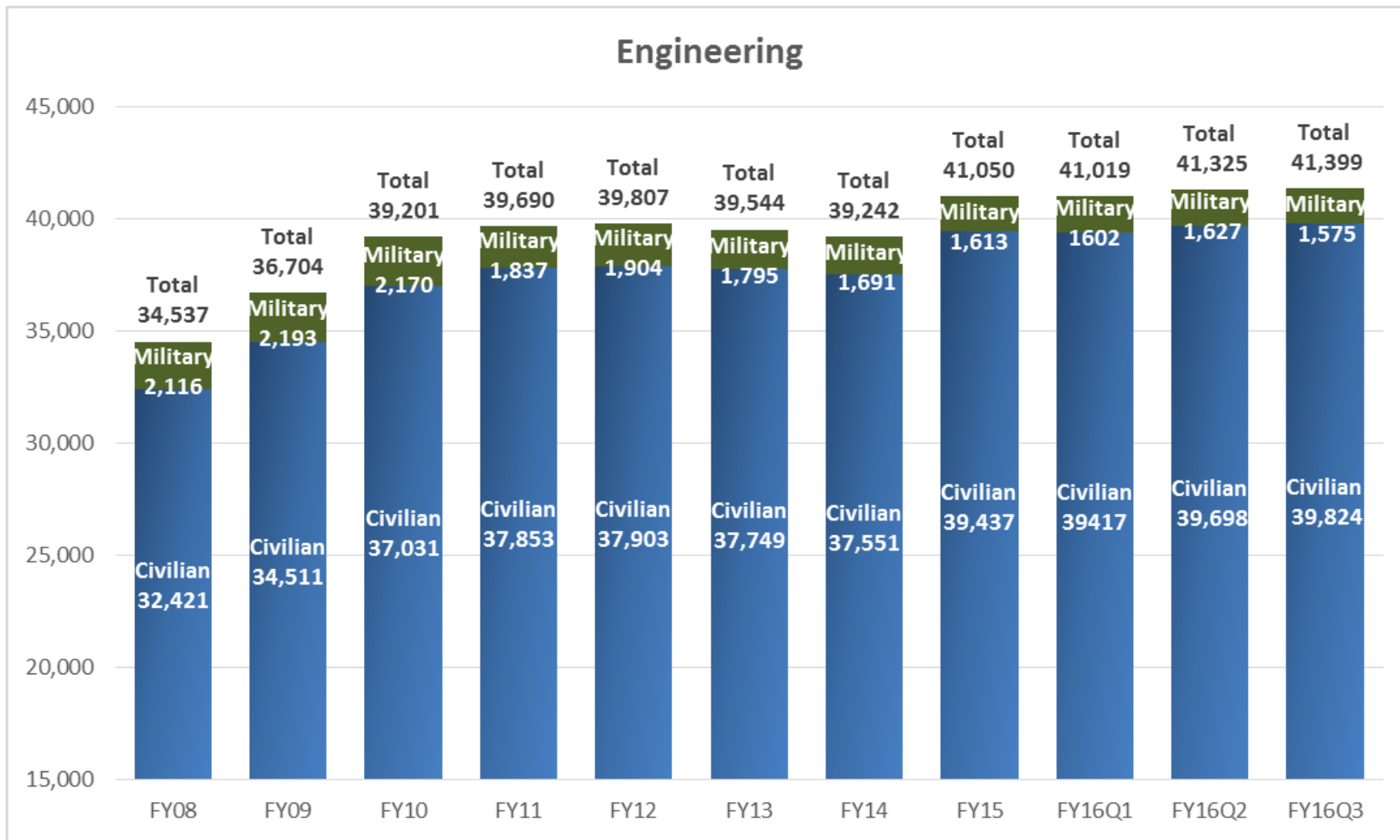
- The current Engineering Defense Acquisition Workforce DAWIA Meets/Exceeds certification rate is 81%; up from 64.3% in FY08
- The current Engineering Meets/Exceeds certification rate is up 16.7% from FY08
- The current Engineering Defense Acquisition Workforce DAWIA 24 month grace period rate is 16.9%; down from 20.5% in FY08
- The current Engineering Defense Acquisition Workforce DAWIA Does Not Meet certification rate is 2.1%; down from 15.2% in FY08

## Defense Acquisition Workforce Retirement Eligibility Highlights

- Senior Career Group 45.9% (18,255) (10 years or less to retirement eligibility or retirement eligible)
- 17.2% (6,828) are currently eligible to retire, ↑ from 12.3% in FY08
- Mid Career Group 21.6% (8,580) (11 to 20 years to retirement), ↓ from 24.1% in FY08
- Future Career Group 32.6% (12,968) (21 to 25+ years to retirement), ↑ from 26.6% in FY08



# Engineering Total Workforce

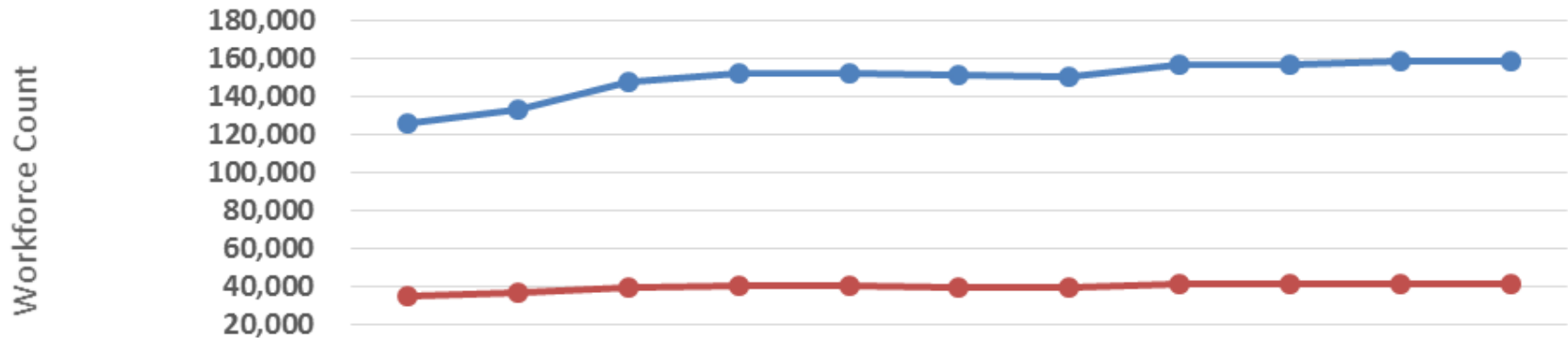




# Engineering Total Workforce



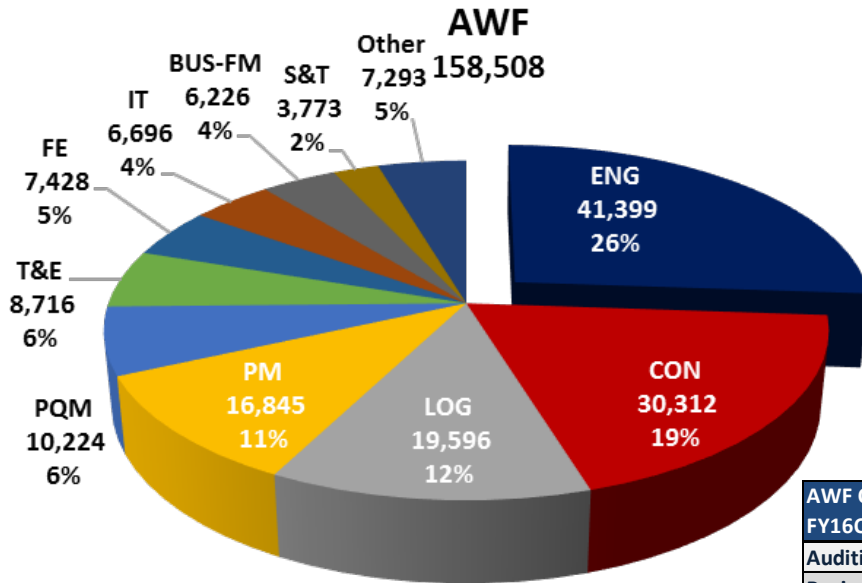
## AWF - Historical Workforce Size FY08 -FY16Q3



	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16Q 1	FY16Q 2	FY16Q 3
● Total AWF	125,879	133,103	147,705	151,891	152,326	151,355	150,465	156,313	156,457	158,212	158,508
ENG % of Total AWF	22%	23%	25%	25%	25%	25%	25%	26%	26%	26%	26%
● ENG Workforce	34,537	36,704	39,201	39,690	39,807	39,544	39,242	41,050	41,019	41,325	41,399



# AWF by Component and Career Field



AWF Count by Career Category FY16Q3	Army	DoN	Air Force	4th Estate	Totals	% Total
Auditing	-	-	-	4,042	4,042	2.6%
Business - CE	244	576	455	84	1,359	0.9%
Business - FM	1,709	2,035	1,888	594	6,226	3.9%
Contracting	7,904	6,308	8,236	7,864	30,312	19.1%
Engineering	9,061	21,549	8,686	2,103	41,399	26.1%
Facilities Engineering	1,557	5,510	283	78	7,428	4.7%
Information Technology	1,669	2,975	1,192	860	6,696	4.2%
Life Cycle Logistics	7,105	6,451	3,126	2,914	19,596	12.4%
Production, Quality and Man	1,368	3,016	379	5,461	10,224	6.5%
Program Management	3,227	6,395	5,536	1,687	16,845	10.6%
Property	48	65	14	267	394	0.2%
Purchasing	309	486	72	591	1,458	0.9%
S&T Manager	442	528	2,680	123	3,773	2.4%
Test and Evaluation	1,910	3,419	3,004	383	8,716	5.5%
Unknown/Other	7	2	-	31	40	0.03%
<b>FY16Q3 Totals (as of 6-30-2016)</b>	<b>36,560</b>	<b>59,315</b>	<b>35,551</b>	<b>27,082</b>		
<b>Component %</b>	<b>23.1%</b>	<b>37.4%</b>	<b>22.4%</b>	<b>17.1%</b>		<b>158,508</b>





# Engineering Workforce Historical Size by Agency FY05 – FY16Q3

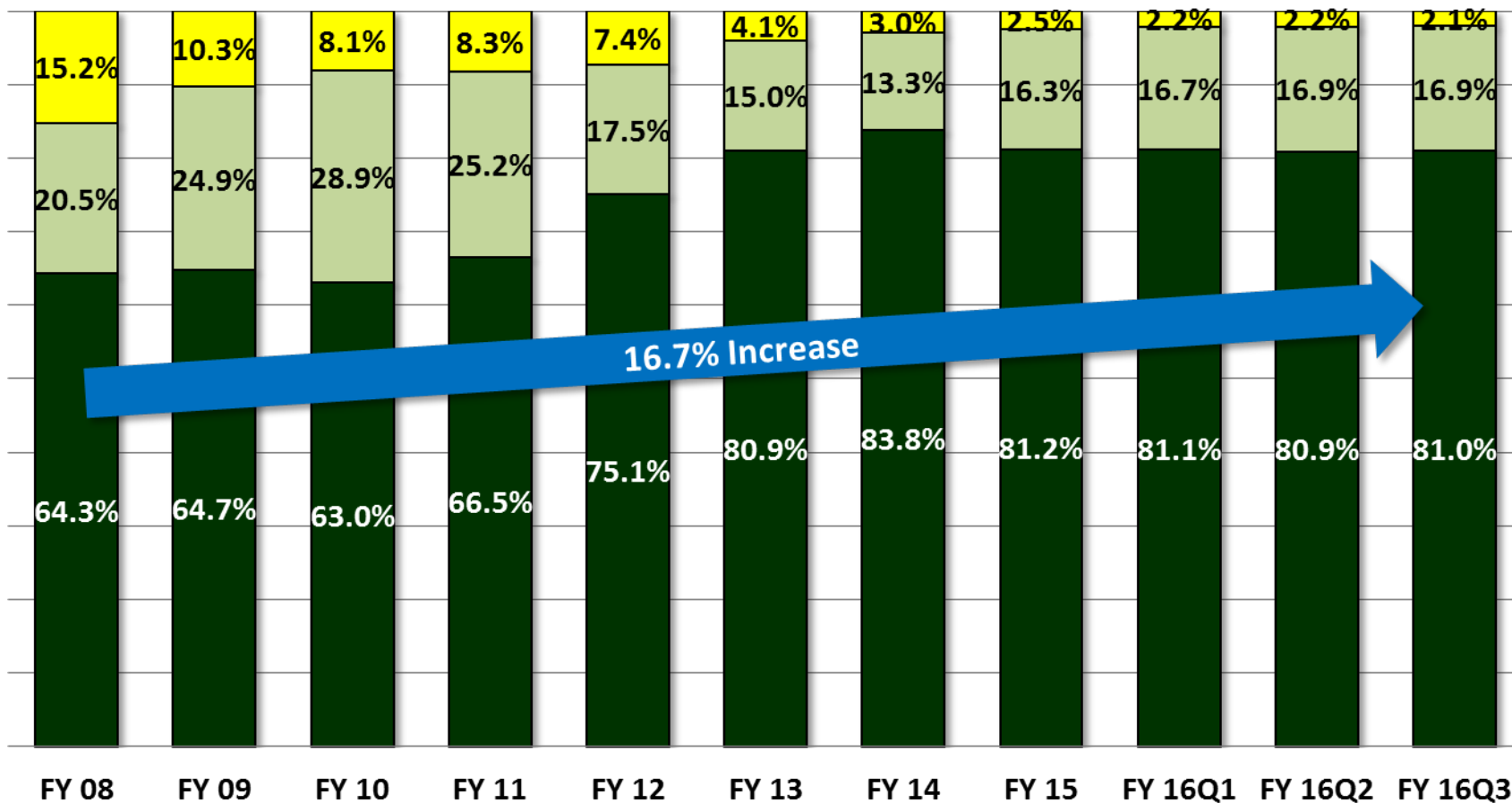


Engineering	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16Q1	FY16Q2	FY16Q3	% Change Since FY08	% Change Since FY15
Defense Acq Workforce																
ARMY	11,138	11,964	11,050	10,769	10,208	10,644	10,108	9,810	9,419	8,981	8,986	9,079	9,063	9,061	-16%	1%
DoN	16,886	16,688	16,804	16,576	18,085	19,270	19,325	19,498	19,588	19,797	21,181	21,174	21,243	21,549	30%	2%
AIR FORCE	6,505	6,237	6,162	6,429	7,197	7,625	8,514	8,649	8,521	8,473	8,903	8,795	8,949	8,686	35%	-2%
DCMA	30	59	393	282	660	813	917	974	1,134	1,157	1,181	1,181	1,206	1,221	333%	3%
DLA	23	14	42	19	16	16	15	11	12	11	11	13	13	12	-37%	9%
DCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MDA	111	117	135	281	363	623	615	644	631	605	582	577	583	588	109%	1%
DISA	4	16	96	89	74	58	69	69	76	74	70	67	67	64	-28%	-9%
DHA	-	-	2	2	8	9	9	10	8	6	2	2	4	4	100%	100%
DTRA	11	1	1	7	11	27	17	35	45	44	43	42	43	46	557%	7%
DAU	26	30	-	33	41	46	48	49	45	40	38	37	42	46	39%	21%
NRO	-	-	-	-	-	-	-	-	-	-	-	-	57	60		
OSD	18	15	16	31	19	25	24	21	29	23	24	23	23	22	-29%	-8%
JCS	-	-	2	-	-	-	-	12	12	10	8	8	8	8		0%
DeCA	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
WHS	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DFAS	-	1	1	-	-	-	-	-	-	-	-	-	-	-		
DoDEA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DMEA	-	-	-	-	-	29	26	23	23	20	20	20	23	30		50%
DoD HRA	-	-	1	-	-	-	-	-	-	-	-	-	-	-		
TRMC	-	-	-	-	-	-	-	1	1	1	1	1	1	1		0%
DSCA	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-100%	
DMA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DSS	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DTIC	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-100%	
DARPA	-	-	1	-	-	-	-	-	-	-	-	-	-	-		
NDU	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
USUHS	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
IG	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-100%	
POW/MIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ASD	-	-	-	-	4	4	3	1	-	-	-	-	-	-		
PFFA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4th Estate Other	-	-	4	16	18	12	-	-	-	-	-	-	-	-		
<b>TOTAL</b>	<b>34,752</b>	<b>35,142</b>	<b>34,710</b>	<b>34,537</b>	<b>36,704</b>	<b>39,201</b>	<b>39,690</b>	<b>39,807</b>	<b>39,544</b>	<b>39,242</b>	<b>41,050</b>	<b>41,019</b>	<b>41,325</b>	<b>41,399</b>	<b>↑</b>	<b>↑</b>
															<b>20%</b>	<b>1%</b>



# Engineering Historical DAWIA Certification FY08 – FY16Q3

## Engineering



■ Meets/Exceeds    ■ 24 Month    ■ Does Not Meet

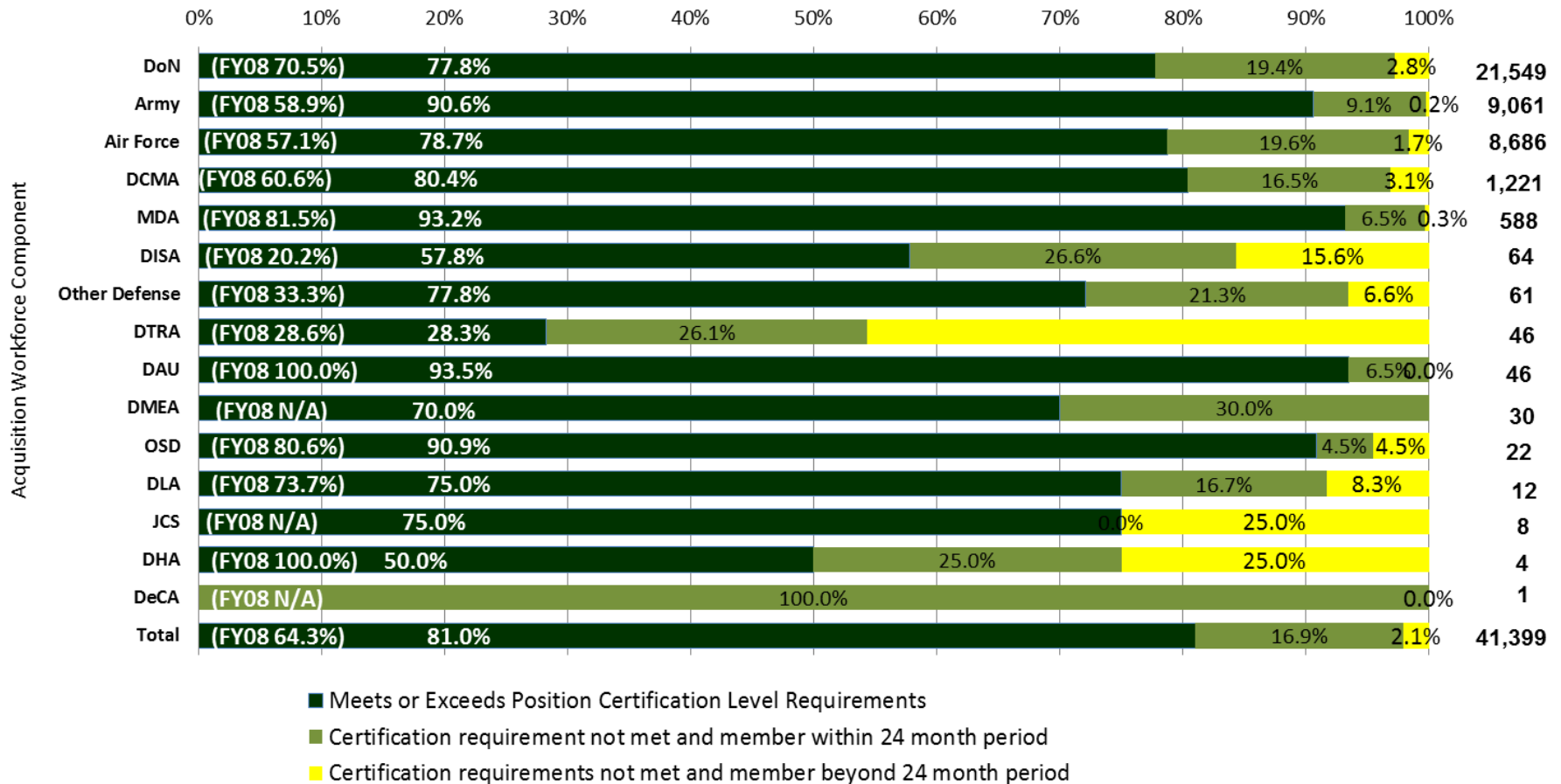
\* Rounded to nearest 0.1%



# Engineering DAWIA Certification by Component



## Certification Level "Meet/Exceed" Rates by Component Engineering (FY16Q3)





# Engineering DAWIA Certification Matrix + Bench Strength

Engineering		Achieved Certification Level				FY16Q3 TOTAL	% Meets Certification Requirement
Required Certification Level	No Level Achieved	Level I	Level II	Level III			
Level I	2,319	2,582	688	270	5,859	60.4%	
Level II	1,862	1,794	6,827	5,890	16,373	77.7%	
Level III	667	350	867	17,278	19,162	90.2%	
Unspecified	3	-	1	1	5		
<b>FY16Q3 TOTAL</b>	<b>4,851</b>	<b>4,726</b>	<b>8,383</b>	<b>23,439</b>	<b>41,399</b>	<b>81.0%</b>	
	11.7%	11.4%	20.2%	56.6%			

No Level Achieved includes those within the 24 month grace period

Bench Strength			
Service	# Exceeds	% Exceeds**	Career Field Rank
DAW	20,609	13.0%	
Army	5,195	14.2%	
DoN	7,274	12.3%	
Air Force	6,428	18.2%	
4th Estate	1,712	6.3%	
Engineering	6,848	16.5%	2 of 14

\*\* Based on population total without unspecified positions

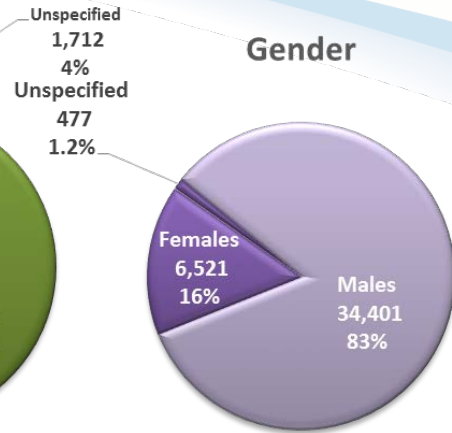
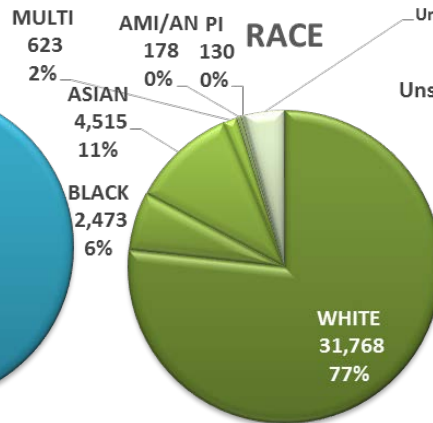
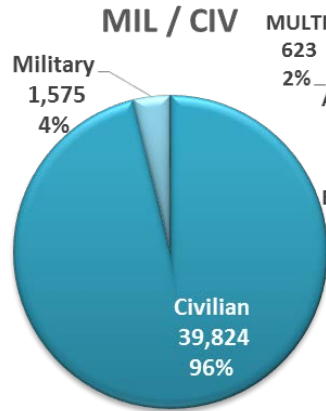
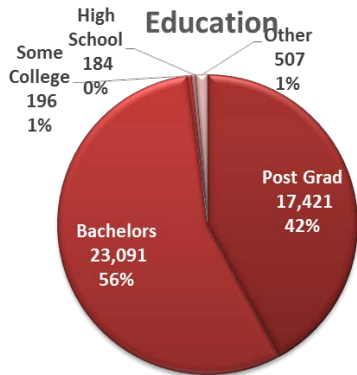
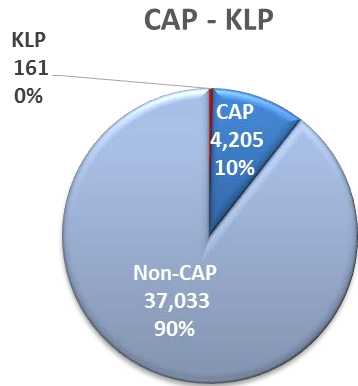
Certification Requirement	Meets	Within 24 Months	Does Not Meet	DAW TOTAL	
Level I	3,540	2,293	26	5,859	14.2%
Level II	12,717	3,266	390	16,373	39.5%
Level III	17,278	1,450	434	19,162	46.3%
Unspecified	1	4	-	5	0.0%
<b>Engineering TOTAL</b>	<b>33,536</b>	<b>7,013</b>	<b>850</b>	<b>41,399</b>	
	81.0%	16.9%	2.1%		

  = Compliance  
  = Exceeds Requirements

\* NOTE: Rounded to nearest 0.1%



# Demographics



Occupied Position Type	Engineering TOTAL	Entire DAW
Key Leadership Positions (KLPs)	161 <i>0.4%</i>	1,138 <i>0.7%</i>
Critical Acquisition Positions (CAPs) *	4,205 <i>10.2%</i>	15,694 <i>9.9%</i>
Non-CAP Positions	37,033 <i>89.5%</i>	141,676 <i>89.4%</i>
<b>TOTAL</b>	<b>41,399</b>	<b>158,508</b>

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

Highest Level of Education	Engineering TOTAL	Entire DAW
Post Grad	17,421 <i>42.1%</i>	62,129 <i>39.2%</i>
Bachelors	23,091 <i>55.8%</i>	69,413 <i>43.8%</i>
Some College	196 <i>0.5%</i>	11,837 <i>7.5%</i>
High School	184 <i>0.4%</i>	12,478 <i>7.9%</i>
Other	507 <i>1.2%</i>	2,651 <i>1.7%</i>
<b>TOTAL</b>	<b>41,399</b>	<b>158,508</b>

Military / Civilian	Engineering TOTAL	Entire DAW
Civilian	39,824 <i>96.2%</i>	142,987 <i>90.2%</i>
Military	1,575 <i>3.8%</i>	15,521 <i>9.8%</i>
<b>TOTAL</b>	<b>41,399</b>	<b>158,508</b>

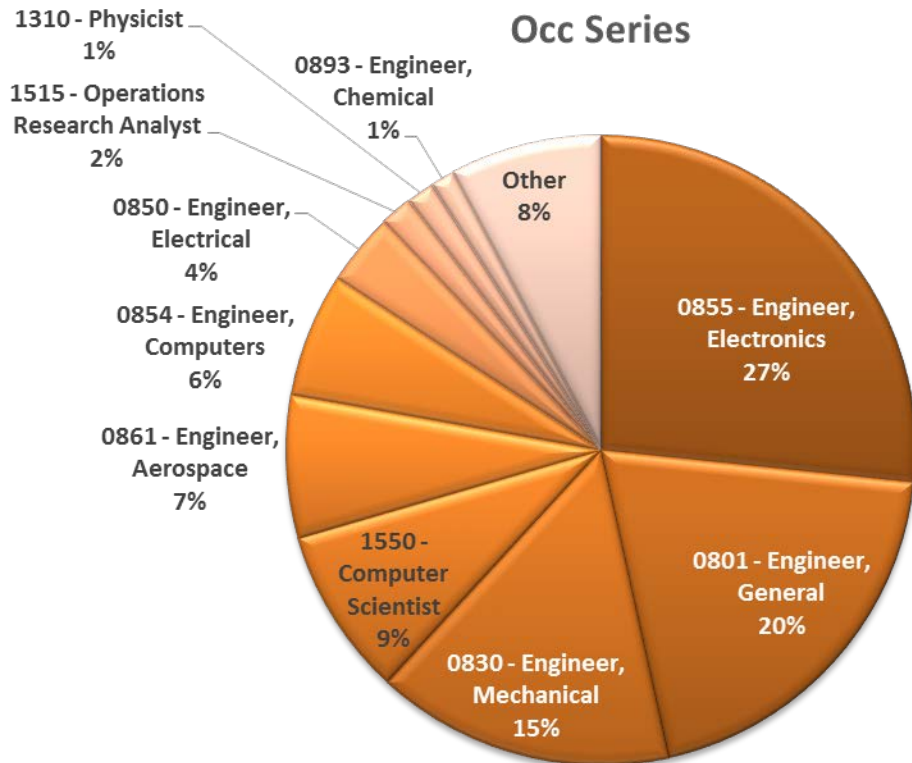
Race	Engineering TOTAL	Entire DAW
WHITE	31,768 <i>76.7%</i>	117,004 <i>73.8%</i>
BLACK	2,473 <i>6.0%</i>	18,850 <i>11.9%</i>
ASIAN	4,515 <i>10.9%</i>	10,260 <i>6.5%</i>
MULTI	623 <i>1.5%</i>	3,415 <i>2.2%</i>
AMI/AN PI	178 <i>0.4%</i>	860 <i>0.5%</i>
PI	130 <i>0.3%</i>	759 <i>0.5%</i>
Unspecified	1,712 <i>4.1%</i>	7,360 <i>4.6%</i>
<b>TOTAL</b>	<b>41,399</b>	<b>158,508</b>

Gender	Engineering TOTAL	Entire DAW
Males	34,401 <i>83.1%</i>	110,710 <i>69.8%</i>
Females	6,521 <i>15.8%</i>	45,575 <i>28.8%</i>
Unspecified	477 <i>1.2%</i>	2,223 <i>1.4%</i>
<b>TOTAL</b>	<b>41,399</b>	<b>158,508</b>



# Engineering Size by Occupational Series

**Occ Series**



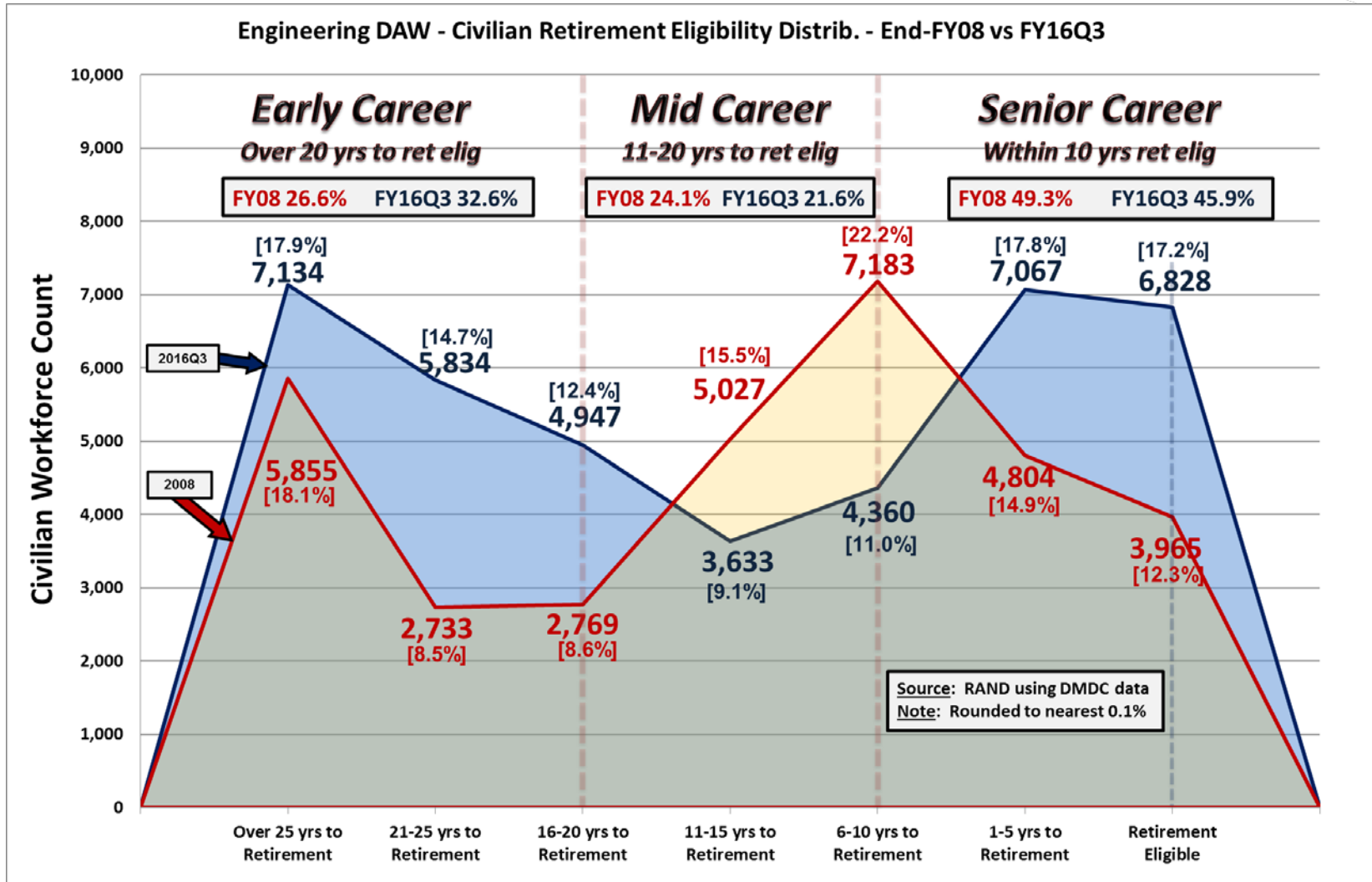
Civilian Occupational Series	Engineering TOTAL	
0855 - Engineer, Electronics	10,608	26.6%
0801 - Engineer, General	7,924	19.9%
0830 - Engineer, Mechanical	6,088	15.3%
1550 - Computer Scientist	3,463	8.70%
0861 - Engineer, Aerospace	2,907	7.30%
0854 - Engineer, Computers	2,538	6.37%
0850 - Engineer, Electrical	1,481	3.72%
1515 - Operations Research Analyst	658	1.65%
1310 - Physicist	563	1.41%
0893 - Engineer, Chemical	498	1.25%
Other	3,096	7.77%
<b>TOTAL CIVILIAN</b>	<b>39,824</b>	<b>Civilians</b>



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



# Engineering Civilian Retirement Eligibility Distribution – FY08 / FY16Q3



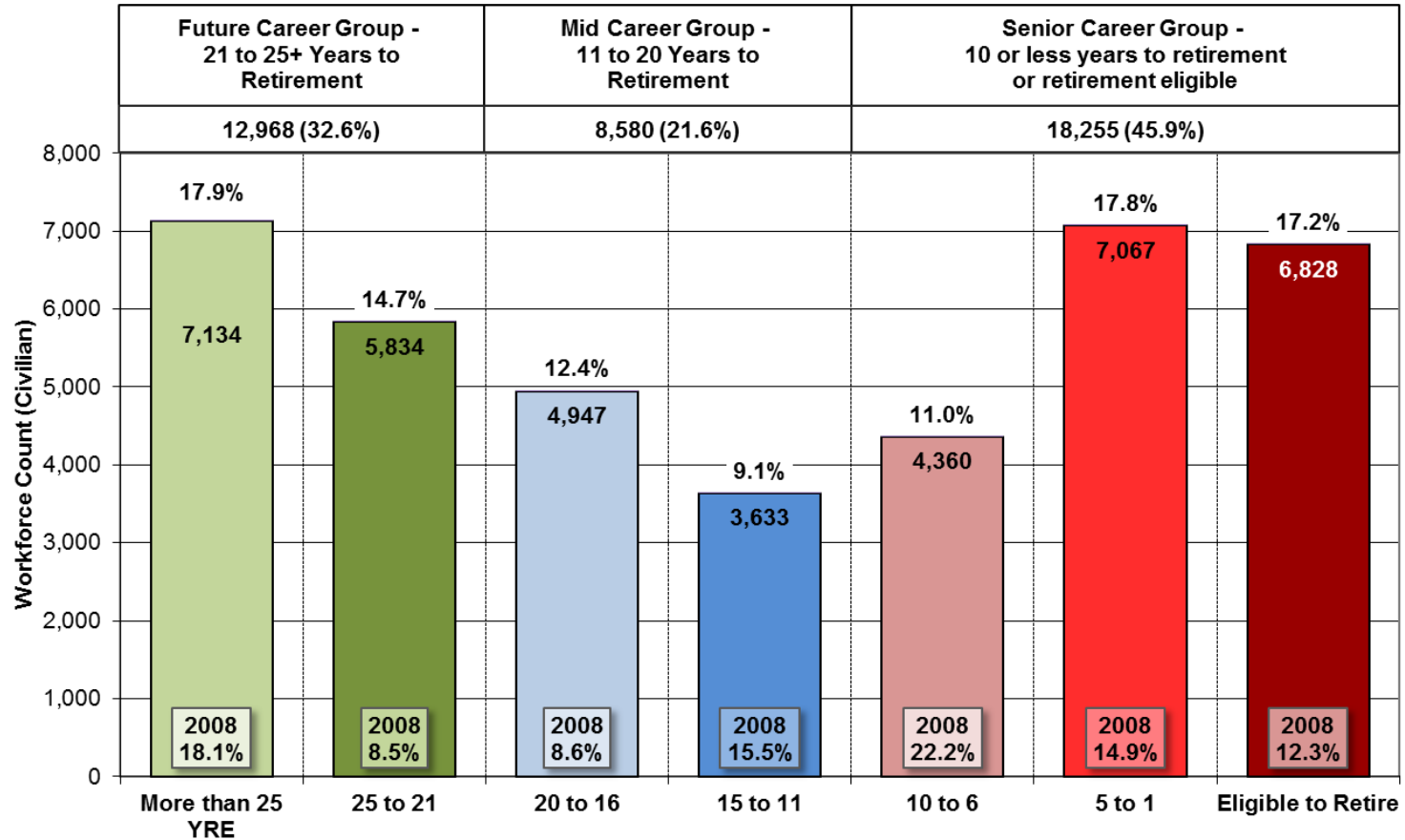
As of the end of FY16Q3 (30 Jun 2016)





# Engineering Workforce Lifecycle Model by YRE

## Defense Acquisition Workforce Lifecycle Model (WLM) by Years to Retirement Eligibility (YRE) - Civilian (FY2016Q3) - Engineering



Source: Chart was generated by OUSD(AT&L)/Human Capital Initiatives using FY2008 and FY2016 (Q1) DMDC data provided by RAND.

As of the end of FY16Q3 (30 Jun 2016)

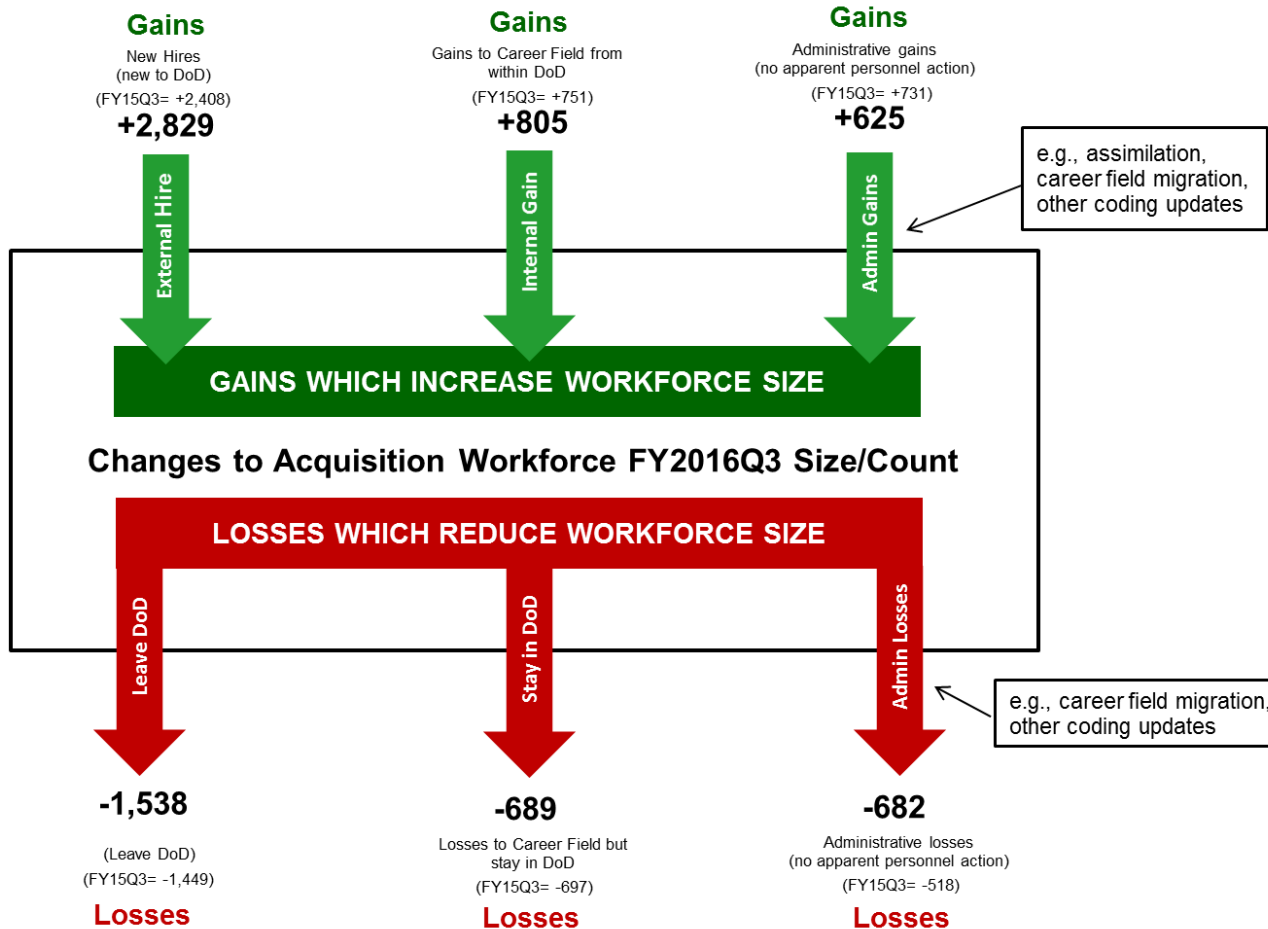


# Engineering Gains/Losses – New Hires Internal/External, Administrative



## Defense Acquisition Workforce (Civilian) (FY2016Q3) - Engineering

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

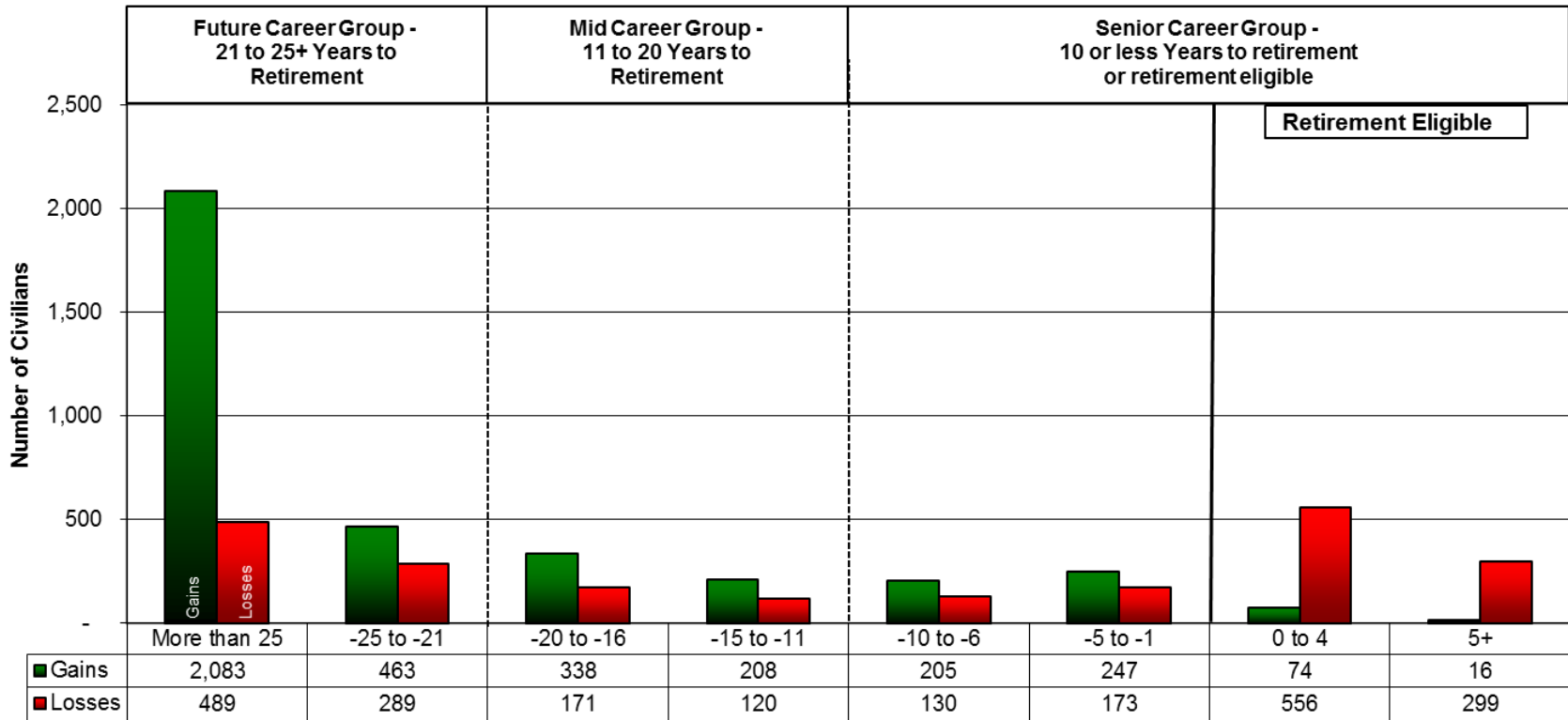


As of the end of FY16Q3 (30 Jun 2016)



# Engineering Gains and Losses by YRE Groups

## Defense Acquisition Workforce (Civilian) - Engineering Workforce Lifecycle FY2016Q3 Gains & Losses\*



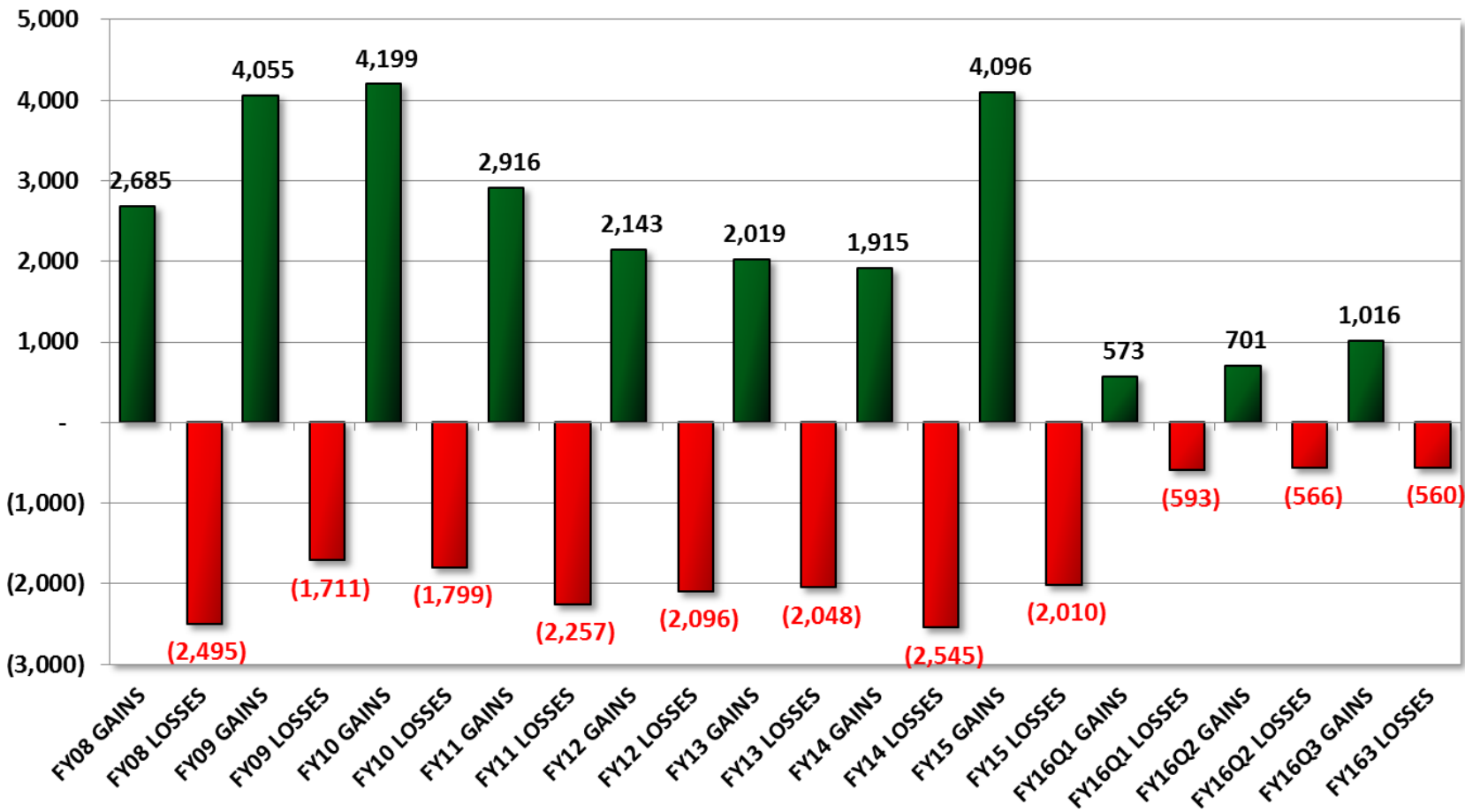
Career Lifecycle by Years to Retirement Eligibility

Source: RAND NDRI Forces and Resources Policy Center analysis using DMDC data (FY2016Q3 and Previous FY Data)

\*Does not include administrative gains and losses



# Engineering Historical Gains and Losses FY08 – FY16Q3



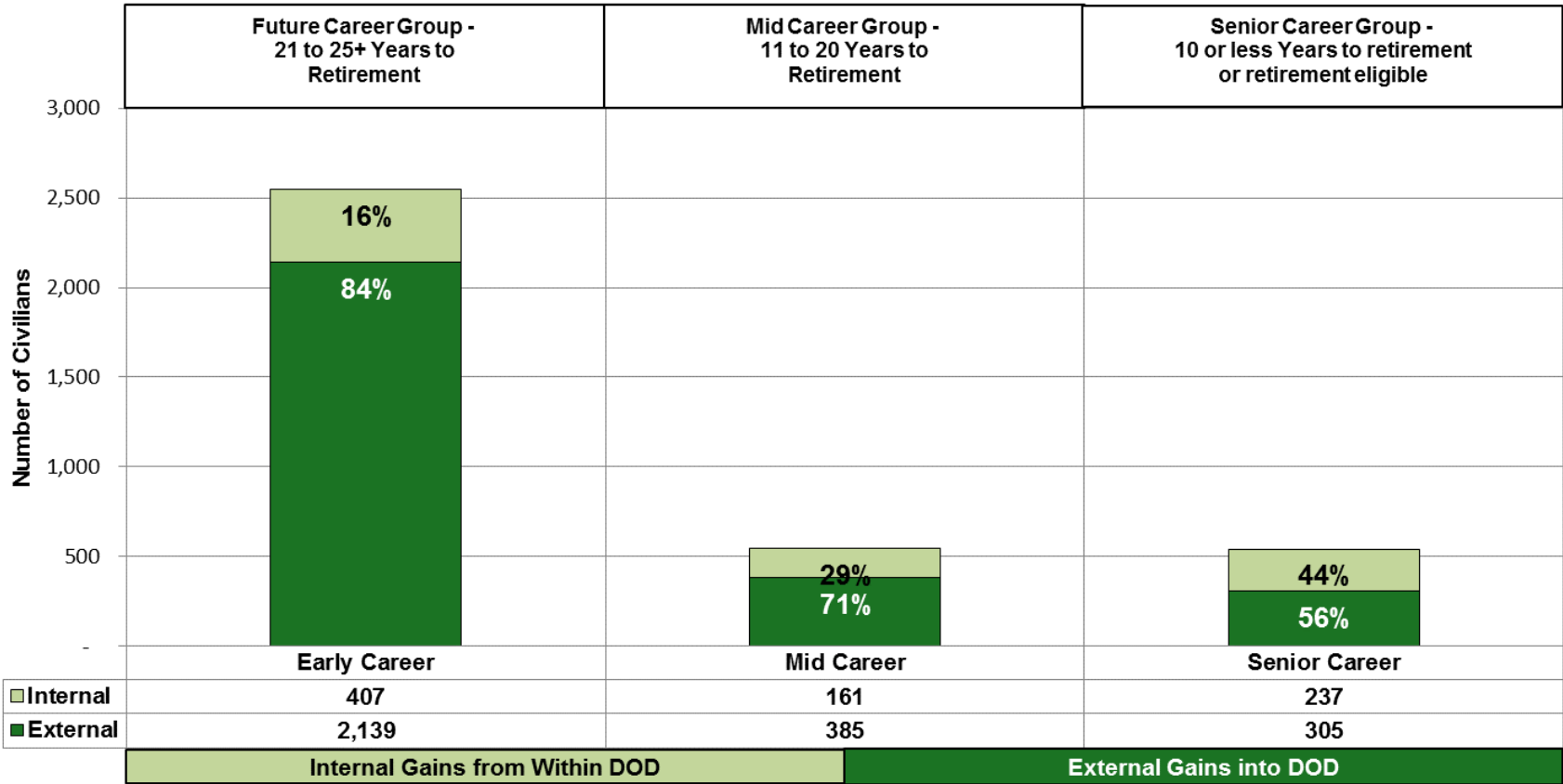
As of the end of FY16Q3 (30 Jun 2016)



# Engineering Internal/External Gains % by Career Group



## Defense Acquisition Workforce (Civilian) - Engineering Workforce Lifecycle FY2016Q3 Gains\*



Source: RAND NDRI Forces and Resources Policy Center analysis using DMDC data (FY2016Q3 and Previous FY Data)

\*Does not include administrative gains

As of the end of FY16Q3 (30 Jun 2016)

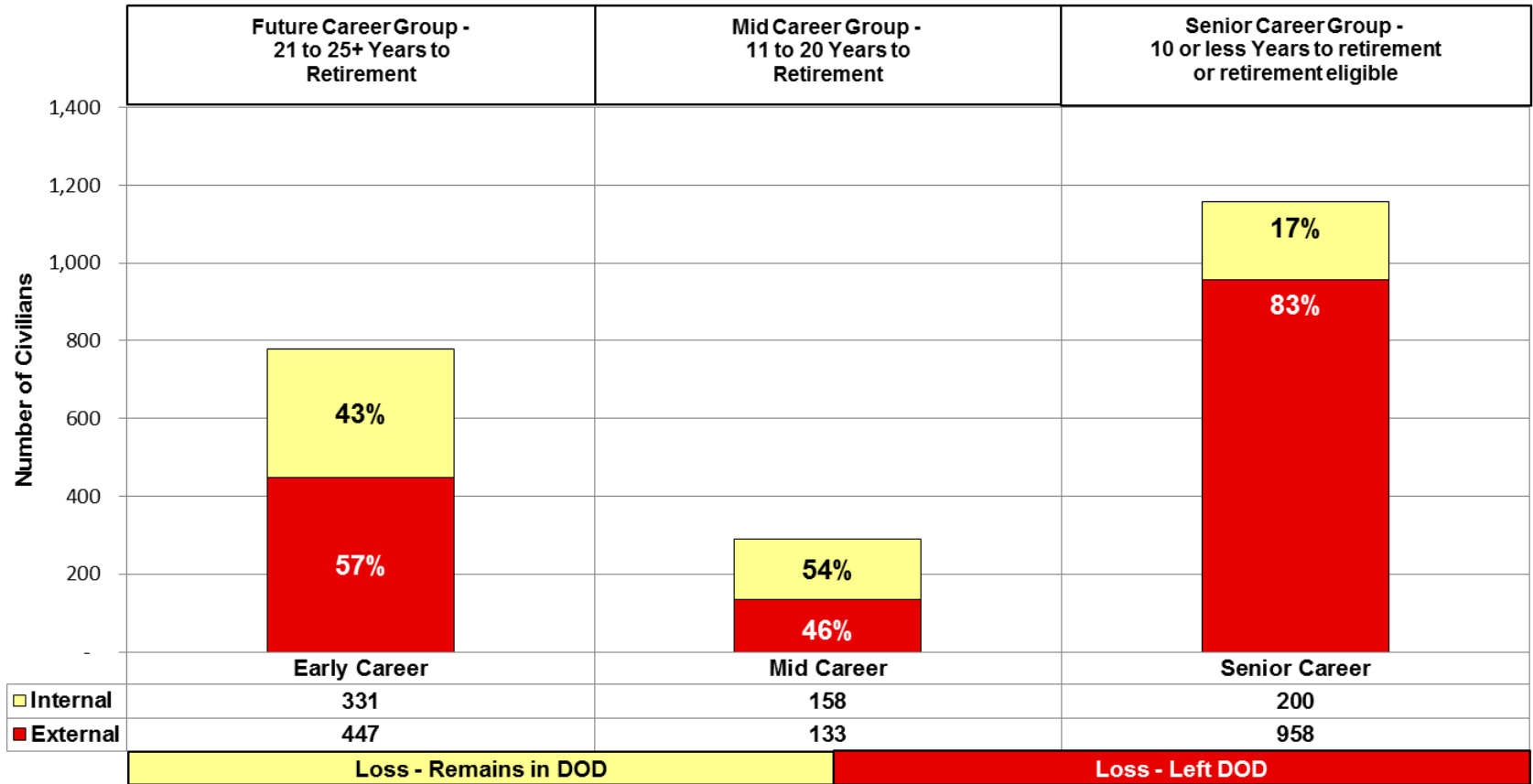


# Engineering Internal/External Loss % by Career Group



## Defense Acquisition Workforce (Civilian) - Engineering

Workforce Lifecycle FY2016Q3 Losses\*



Source: RAND NDRI Forces and Resources Policy Center analysis using DMDC data (FY2016Q3 and Previous FY Data)

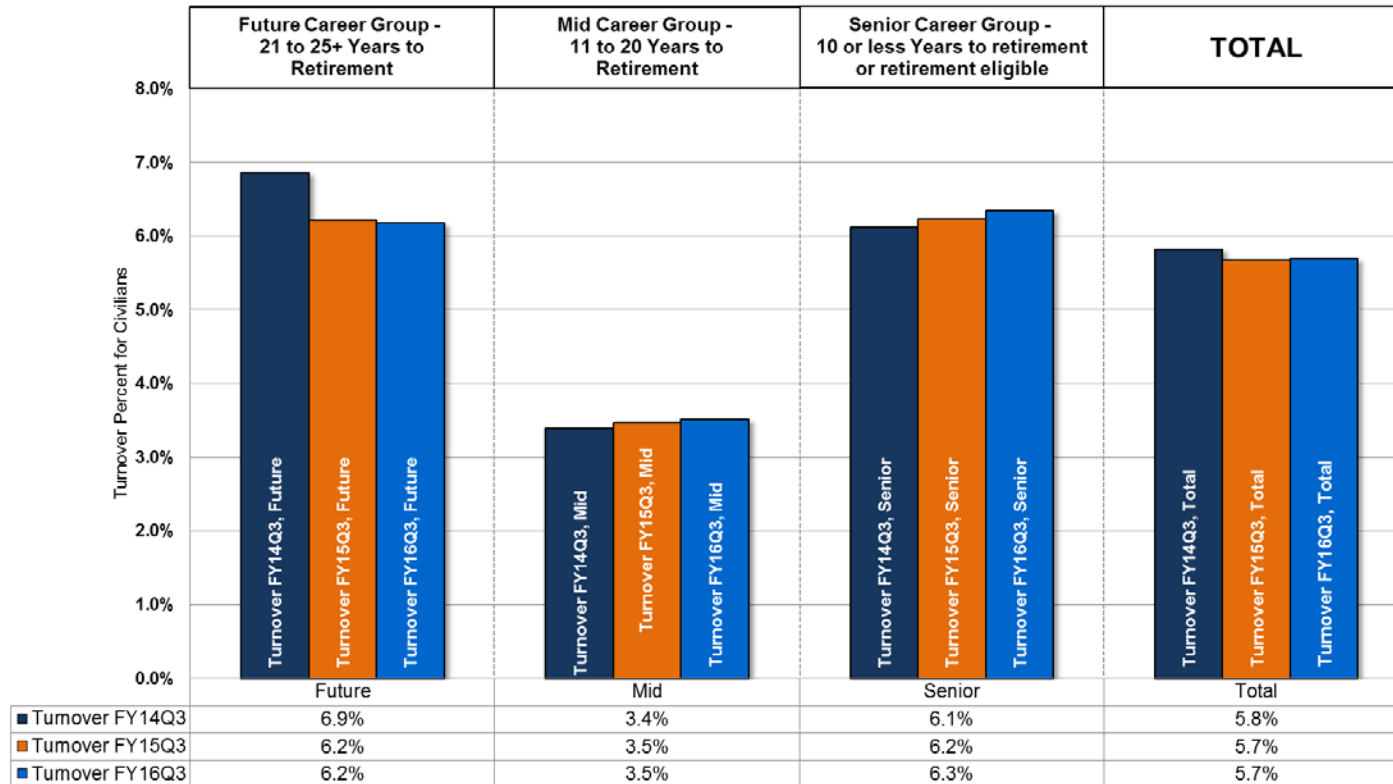
\*Does not include administrative losses

As of the end of FY16Q3 (30 Jun 2016)



# Engineering Turnover Rates by Career Group

## Defense Acquisition Workforce Turnover - Engineering (Civilian) (FY14Q3, FY15Q3, FY16Q3)(by Career Lifecycle Group)



Turnover Percent by Career Lifecycle Groups

As of the end of FY16Q3 (30 Jun 2016)

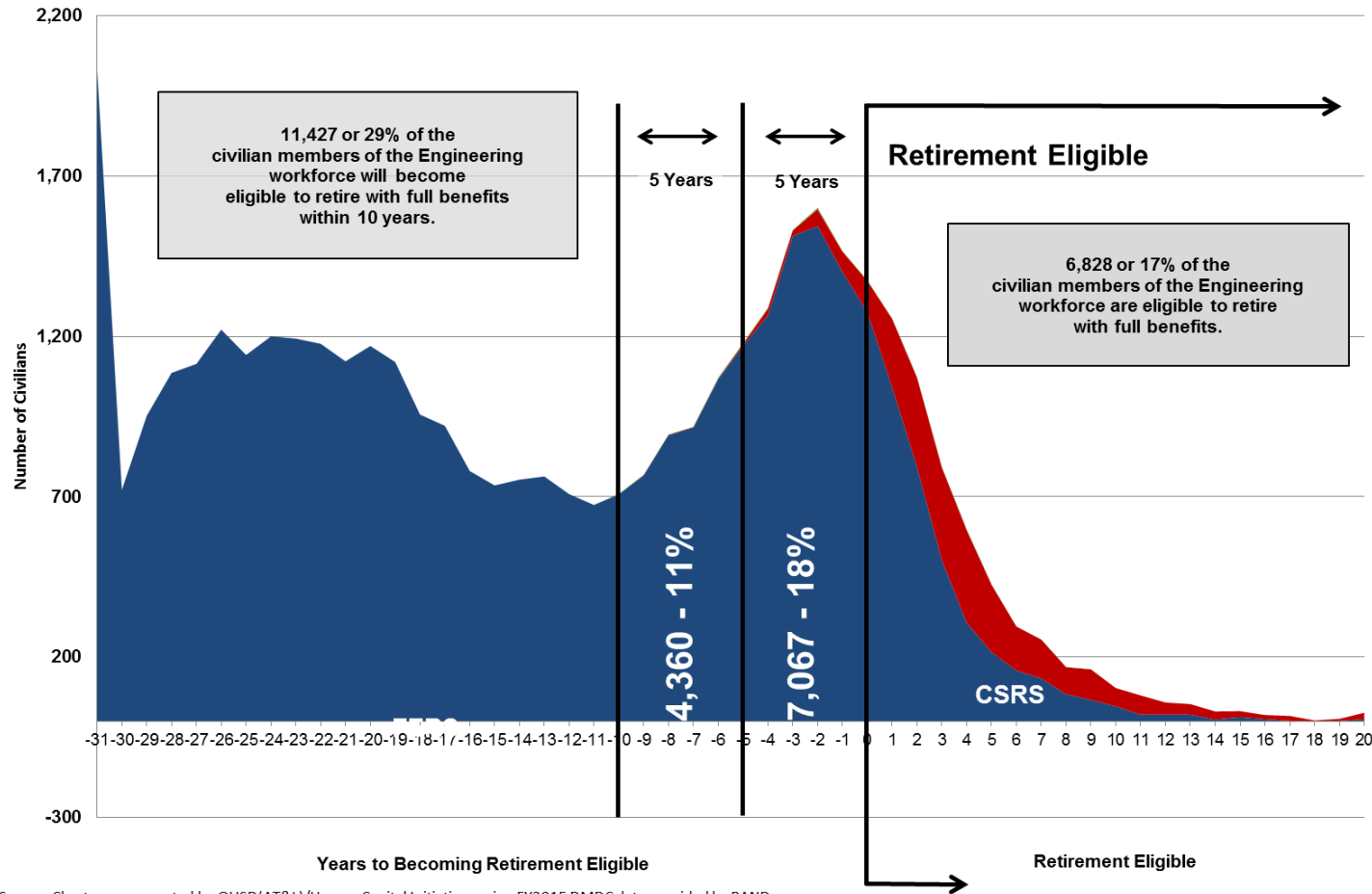


# Engineering Civilian Distribution by Years to Retirement Eligibility



## Defense Acquisition Workforce - Engineering

Distribution by Years to Retirement Eligibility (Civilians)(FY2016Q3)



Source: Chart was generated by OUSD(AT&L)/Human Capital Initiatives using FY2015 DMDC data provided by RAND.

As of the end of FY16Q3 (30 Jun 2016)





***END***