Software Team Composition and Occupation Groups

A Namcook Analytics study sponsored by AT&T was charged with finding the numbers and kinds of occupation groups that worked on software in major organizations such as IBM, AT&T, the Navy, and about a dozen others. In all, 126 distinct job roles were identified.

Software Risk Master (SRM) reports indicate the number of employees that work in 20 common job roles. Small applications of 100 function points may only have two or three roles. Large systems above 10,000 function points have at least 20 occupation groups. Because the various occupations work on different materials at different rates of speed, it is important to use this data for estimates of software schedules and costs.

Example 9: How Software Risk Master (SRM) Evaluates Software Teams and Occupations

Java Language for all 4 Cases
100, 1000, 10,000, 100,000 function point samples
$10,000 per month for all 4 Cases

Iterative development for all 4 Cases

132 effective work hours per month for all 4 Cases
SRM automatic sizing predicts size in < 2 minute
2017 is the 30th anniversary of IFPUG function point metrics

		100	1000	10,000	100,000	Occupations, personnel grow with app size
		Function Points	**Function Points**	**Function Points**	**Function Points**	
	Team Occupation Groups	**Personal app**	**Department app**	**Corporate app**	**Global app**	
1	Programmers	2	7	47	327	**#1 occupation**
2	Testers	2	6	42	289	**#2 occupation**
3	Designers	1	2	20	180	
4	Business analysts	1	2	20	180	
5	Technical writers	0	1	8	68	
6	Quality assurance	0	1	7	58	
		Function Points	**Function Points**	**Function Points**	**Function Points**	

	Team Occupation Groups	Personal app	Department app	Corporate app	Global app	
7	1st line managers	1	2	8	49	**Usually 8 employees per manager**
8	Data base administration	0	1	4	29	
9	Project Office staff	0	0	3	25	
10	Administrative support	0	1	4	29	
11	Configuration control	0	0	2	16	
12	Project librarians	0	0	2	13	
13	2nd line managers	0	0	2	10	
14	Estimating specialists	0	0	1	10	
15	Architects	0	0	1	7	
16	Security specialists	0	0	1	4	
17	Perfomance specialists	0	0	1	4	
18	Function point counters	0	0	1	4	**Function point counters often consultants**
19	Human factors specialists	0	0	1	4	
20	3rd line managers	0	0	0	2	
	Occupation Groups	**5.00**	**9.00**	**24.00**	**25.00**	**AT&T study found 129 total software occupations**
	Personnel	**7.00**	**25.00**	**172.00**	**1,307.00**	
	Function points per team member	**14.29**	**40.00**	**58.14**	**76.51**	