Industry Norms for Work Hours

There are over 200 U.S. industries that produce software applications. As with countries, work hour patterns vary widely by industry and also by company.

The hardest working industry sector is that of start-up technology companies. The lowest working industry sector is that of state governments. Here too users of SRM can provide their own local data on work hour patterns.

Example 4: How Software Risk Master (SRM) Evaluates Unpaid Overtime and Industry Work Norms

Java Language for all 3 Cases
1000 function points for all 3 Cases
$10,000 per month for all 3 Cases
Iterative development for all 3 Cases
Industry norms for work hours, unpaid overtime
2017 is the 30th anniversary of IFPUG function point metrics

	State government	Commercial Bank	Tech Startup	
Monthly work hours	117	135	191	Industry work hours vary widely
Team experience level	Below average	Average	Expert	Team experience varies widely
Application complexity	Average	Average	Average	Complexity varies widely
Unpaid overtime hours	0.00	6.00	16.00	Unpaid overtime varies widely
Total monthly work hours	117.00	141.00	207.00	Total work hours vary widely
Software team size	7.00	6.50	6.00	Team size reflects experience

Software schedule months		16.94		16.00		12.00	Schedules reflect monthly work hours; experience
Software effort months		162.00		115.00		71.00	Effort reflects monthly work hours; experience
Software effort hours		18,954		16,206		14,904	Long work hours shorten schedules
Software development $		$1,617,000		$1,149,000		$708,000	Costs reflect monthly work hours; experience
Software $ per FP		$1,617.00		$1,149.00		$708.00	Costs per FP reflect monthly work hours; experience
Work hours per FP		18.92		16.20		14.90	Work hours per FP do not reflect local work hours
Function points per month		6.18		8.70		14.08	Function points per month reflect local work hours
LOC per month		329.22		463.77		746.54	LOC per month reflect local work hours; experience
			END OF EXAMPLE				

Table 1: U.S. Industry Ranges of Work Hours and Unpaid Hours per Month

	U.S. Industry segments	Software Work hours per month	Software Unpaid overtime per month	Software total hours per month	Percent of Average Work hrs.
1	Startup technology companie	191.67	16.00	207.67	150.48%
2	Technology companies	175.00	14.00	189.00	136.96%
3	Computer games	165.00	8.00	173.00	125.36%
4	Open source	160.42	8.00	168.42	122.04%
5	Web/cloud	150.00	8.00	158.00	114.49%
6	Bioengineering/medicine	147.50	10.00	157.50	114.13%
7	Fixed-price contracts	138.28	12.00	150.28	108.90%
8	Management consulting	142.00	8.00	150.00	108.70%
9	Outsource contractors	140.13	8.00	148.13	107.34%
10	Manufacturing	136.44	6.00	142.44	103.22%
11	Finance/insurance	134.59	6.00	140.59	101.88%
12	Telecom	134.59	6.00	140.59	101.88%
13	Entertainment	132.75	6.00	138.75	100.54%
14	**U.S. Average**	**132.00**	**6.00**	**138.00**	**100.00%**
15	Wholesale/retail	131.00	6.00	137.00	99.28%
16	Health care	130.00	4.00	134.00	97.10%
17	Avionics	129.06	4.00	133.06	96.42%
18	Energy	127.29	4.00	131.29	95.14%
19	Profit-center projects	125.38	4.00	129.38	93.75%
20	Time & material contracts	129.06	0.00	129.06	93.52%
21	Education	123.53	2.00	125.53	90.96%
22	Federal government	123.53	0.00	123.53	89.52%
23	Cost-center projects	119.84	2.00	121.84	88.29%

24	Defense			121.69	0.00	121.69	88.18%	
25	State/local government			117.26	0.00	117.26	84.97%	
	Average			**142.61**	**7.20**	**149.81**	**108.56%**	