

Please describe your experiences in recruiting resources supporting Biostatistics and Statistical Programming. Describe the locations in which you would plan to hire staff (by function), identify any geographic constraints in hiring the required skillsets.

Biostatistics and Statistical Programming plays a vital role from the start of clinical trial through the completion. Hence it is important to recruit the right candidates having domain knowledge, technical skills and good working experience on various therapeutic and disease area.

TCS has been into Life Science industry for more than 10 years and has expertise in ramping up to the team size of 350-400. TCS have been involved in setting-up accounts where we have started with size of 25 resources and ramp up to the size of 80-100 resources.

Section 1: Hiring Plan

TCS will implement a two stage process for managing this engagement. Stage1 where TCS will set-up the core team in various regions and stage2 where TCS will ramp-up over period of time to manage J&J expected volumes.

Cumulative Numbers	Q3'2018					Q4'2018 - Cumulative					Q1'2019 - Cumulative					Q2'2019 - Cumulative				
	US	EU	China	India	Total	US	EU	China	India	Total	US	EU	China	India	Total	US	EU	China	India	Total
Statistical Programmer Analyst	0	0	0	12	12	0	0	0	18	18	0	0	0	24	24	0	0	0	28	28
Senior Programmer Analyst	2	2	0	4	8	3	2	1	7	13	4	2	3	11	20	4	2	3	15	24
Programming Manager	2	2	1	2	7	3	2	1	4	10	4	2	1	5	12	4	2	1	6	13
Senior Statistician	1	1	1	2	5	2	1	1	2	6	3	3	1	4	11	4	3	2	4	13
Principal Statistician	1	1	1	0	3	2	1	1	0	4	3	1	1	1	6	4	2	1	1	8
Associate Director	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1
Functional Manager	1	1	1	0	3	2	1	1	0	4	3	1	1	0	5	3	1	1	0	5
Total	8	7	4	20	39	13	7	5	31	56	18	9	7	45	79	20	10	8	54	92

Stage 1: TCS will set-up a core team of 39 associates in stage 1 in 4 different geographies. The plan is to have all key roles in place and form the core team. This team will then ensure the stage 2 ramp-up is smooth delivery is as per J&J expectation

USA Strategy (8 FTEs): In USA, TCS will place resources in the New Jersey and Pennsylvania area so that they can have face to face meetings with J&J team at their **Titusville, Raritan and Springhouse location**. TCS will have Associate Director Biostatistics who will oversee the US delivery. Apart from that other key and client facing roles will be placed in US including FM, PS, SS, PM and Sr. SPA. TCS will not have any SPA role from USA.

Belgium Strategy (7 FTEs): In Belgium, TCS will place resources in the Brussels area so that they can have face to face meetings with J&J team at their **Beerse office**. TCS will place one FM in Brussels who will oversee the Belgium delivery along with managing FM related activities. Apart from that other key and client facing roles will be placed in US including FM, PS, SS, PM and Sr. SPA. TCS will not have any SPA role from Belgium.

China Strategy (4 FTEs): In China, TCS will place resources in the Shanghai area. TCS will place one FM in Shanghai who will oversee the China delivery along with managing FM related activities. Apart from that other key and client facing roles will be placed in US including FM, PS, SS and PM. TCS will not have any SPA role from China.

India Strategy (20 FTEs): In India, TCS will leverage the current team experts who are working on J&J deliverables. TCS will align two Programming Managers from the current team to ensure the knowledge gained from current TCS-Janssen engagement is retained and carried forward in MBSM. TCS will set-up team of 20 FTEs with a mix of senior and junior roles. The India team will not have FM, ADS and PS role as they will collaborate with the global team on studies to ensure quality and efficiency is in-built in the delivery model. They will leverage global expertise to manage deliverables.

Stage 2: Once the core team is set-up, TCS will gradually ramp-up from 39 FTE in Q3'2018 to 92 FTEs in Q2'2019.

Period/FTE	US	Belgium	China	India	Total
Q3-2018	8	7	4	20	39
Q2-2019	20	10	8	54	92

FM role will be primarily delivered from US, Belgium and China. SPA role will be delivered from India only and India team will work in collaboration with the US/Belgium/China team.

Section 2: Hiring Constrains

Below is our experience in recruiting the Biostatistics and Programming across region:

India Experience

Today we have around 315+ associates in India with varied level of experience ranging from 2 to 15+ years of experience. Below table illustrate experienced associates in TCS at each role:

Region	Role	Number of Associates	Minimum # years of relevant work experience required
India	Biostatistician	15	1
India	Lead Biostatistician*	4	5
India	Principal Biostatistician*	14	8
India	Statistical Programmer	137	1
India	Senior Statistical Programmer	44	3
India	Lead Statistical Programmer*	46	5
India	Principal Statistical Programmer*	58	8

* Senior Roles

Constraints in recruiting the staff at India location –

In India, we have large pool of mid-level candidates with experience ranging from 2-6. However for senior candidates with more than 6 years of experience the availability is limited and the time required to onboard the candidate is high. Based on our experience, for Lead/Principal Statistical Programming role the onboarding time is between 3-4 months and for Lead/Principal Biostatistician role the onboarding time is between 4-6 months and hence TCS would require reasonable lead time for recruiting the staff at the above role marked with “*”.

US, EU and China Experience

For US, EU and China region TCS has experience and expertise in hiring resources for other domains in IT and other sectors where TCS has significant associates base. For such clients TCS has hired key roles locally as well as TCS has send Expatriate (EXPAT) from India.

For Biostatistics and Statistical Programming (B&SP) TCS has primarily send senior resources from India (EXPAT) on work visa to US and EU region. However, TCS has dedicated recruitment team based out of US, EU and China who is supporting TCS is setting up the operations for B&SP as defined in the hiring schedule.

In US, EU and China most of the roles required for the MBSM engagement are available and can be on-boarded with 2 months of prior notice. For critical statistical positions, the hiring time may range between 2-4 months.