

ANNEX A:
[KPI Examples]

Time

- ❑ On-time completion percentage
- ❑ Shorten target construction period
- ❑ Reduce EOT



DESIGN




FABRICATION




CONSTRUCTION





FM


 **Design sign-off** within xx months of appointment


 xx% improvement in time spent for **design confirmation**

 xx% time savings in **generating design options** through computational BIM


 xx% improvement in time spent in **ICE documentation** / design issue documentation


 Shorten PPVC (or DfMA) **production lead time** by xx weeks


 xx% time savings in **production monitoring** / manpower tracking

 xx% time savings in **receiving orders** digitally


 Zero **delivery delays**


 95-100% **Delivery-On-Time-in-Full** [DIFOT]: actual delivery time / planned delivery


 xx% improvement in **construction drawing approval** latency


 xx% **Construct Plan Reliability** [CPR]: total number construction tasks actually completed vs planned


 Reduce **installation time** by xx per module / run

 On-time **completion percentage** / ahead vs delay

 xx% improvement in timeliness of **progress update reporting** (or within xx days of completion)

 xx% time savings in preparing and processing digital **payment claims**

 xx% productivity improvement in **as-built verification** and documentation

 Achieve 90% **turnover of defects** within 14 days



Manpower

- ❑ Manpower saving
- ❑ Increase employee satisfaction
- ❑ Reduce turnover rate



DESIGN



FABRICATION



CONSTRUCTION



FM



Reduce man-hours spent by xx% in **design optimization** (e.g. lighting provision optimization)



xx% manpower savings in **inventory tracking** during production stage and delivery



Xx% manpower savings from fabrication **automation**



xx% manpower savings in **optimized onsite planning and resource management** (e.g. through using Lean planning tools)



Increased workers satisfaction over time



Improvement of FM/AM staff competency in using BIM for maintainability of assets & physical spaces

Safety

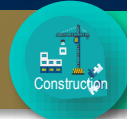
- ❑ Improve site safety process
- ❑ Zero accident, regardless minor or fatal



DESIGN



FABRICATION





CONSTRUCTION





FM


Design for safety


 Reduction in **no. of waivers** related to safety

 Reduced no. of **safety incidents** by xx (e.g. by using virtual simulations to check product dimensions and tonnage for lifting/handling and transportation)

 Reduce errors in **crane hoisting** (e.g. by virtually simulating hoisting path)

 xx% improvement in **Permit-To-Work** submission

 xx% improvement in lodging **non-conformances** during safety inspection

 xx% improvement in **producing safety audit report**

Quality

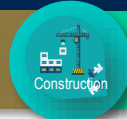
- Improve turnaround of quality inspection
- Reduce defects
- Client satisfaction



DESIGN



FABRICATION



CONSTRUCTION



FM

- Reduction in revisions and **design changes**
- Good quality “**frozen design model**” handover to contractor

- Reduce **number of defects** arising from fabrication errors (e.g. by virtually picking up errors before fabrication of material and product)
- Reduced no. of **fabrication drawing resubmittals**

- Reduction in time spent for **inspection approval**
- Reduced no. of rework due to **workmanship and wrong installation**
- Reduced no. of **fabrication drawing resubmittals**

- Not more than 1 **re-inspection for TOP**
- % improvement in **defect rectification turnaround**
- Reduced **number of defects** (measure performance trending by trade subcontractor)

\$\$ Cost

- ❑ Reduce rework
- ❑ Reduce material wastage



DESIGN



FABRICATION



CONSTRUCTION



FM

\$\$ Improved client decision making (e.g. using BIM-based QTO to estimate cost accurately)

\$\$ Cost savings in DfMA mould production (e.g. by **reducing number of module types**)

\$\$ xx% reduction in **abortive works** onsite

\$\$ xx% cost savings in **commissioning handover** (e.g. by implementing C2O process system)

\$\$ xx% reduction in **change orders** issued to off-site factory

\$\$ xx% reduction in **material wastage** (i.e. concrete/rebar wastage)

\$\$ xx% savings in **operations cost** through smart FM (e.g. by using model-based predictive operations and maintenance)