

ABSTRAK

Penelitian ini bertujuan memberi usulan dalam pengelolaan proyek dengan menggunakan konsep *Lean Construction* melalui *last planner system for production control* dan *work structuring* agar dapat meningkatkan kehandalan perencanaan proyek.

Proyek XYZ adalah proyek dengan kerumitan atau kompleksitas tinggi, sehingga berpotensi mengalami keterlambatan yang disebabkan banyak faktor seperti material, tenaga kerja, peralatan, perencanaan yang kurang handal, keterlambatan pekerjaan subkon, koordinasi yang lemah, dan lain-lain. Dalam rangka menghindarkan proyek dari keterlambatannya, maka upaya yang dilakukan tim proyek XYZ adalah melakukan program percepatan proyek berupa penambahan waktu kerja (lembur) yang akan mengurangi keseluruhan durasi waktu dan mempercepat pekerjaan hingga 30%. Demikian juga dengan penggunaan sistem kerja shift dapat mereduksi durasi waktu dan mempercepat pekerjaan hingga 50% dari rencana yang ditetapkan.

Menurut LCI (*Lean Construction Institute*) yang disampaikan oleh Abduh (2007) bahwa pemborosan pada proyek konstruksi umumnya sekitar 57%, hal tersebut diperkuat oleh hasil identifikasi terhadap 31 *non value added activities* yang berpotensi menjadi sumber pemborosan di proyek XYZ. Salah satu solusi dalam mereduksi *waste* yaitu membuat perencanaan proyek yang handal melalui *last planner system for production control* dan *work structuring*. Kehandalan perencanaan proyek XYZ ditandai dengan nilai PPC (*percent planned completed*) sebesar 77.78%, hal ini berarti *non value added activities* yang ada di proyek XYZ bisa direduksi seiring dengan pergerakan positif progress pekerjaan, sehingga proyek XYZ dapat mengurai “pekerjaan menunggu” hingga 52% dari bulan Agustus sampai dengan Desember 2012 melalui indikator *task completed* setiap bulannya.

Hasil integrasi desain “*product-process*” (*supply chain, product, process & operation*) pada *remaining works*, memberi dampak positif bagi indikator kinerja QCDS (*quality, cost, delivery time & safety*). Namun juga memberi dampak negatif pada kinerja biaya karena adanya penambahan biaya secara keseluruhan. Dengan demikian, adanya integrasi pada desain *product-process* terhadap kinerja QCDS membuat “pekerjaan yang berpotensi terlambat” menjadi “*on time schedule*”, karena adanya 12 terobosan yang dilakukan proyek XYZ terkait pengintegrasian tersebut.

Kata Kunci: *Lean Construction, Waste, Last Planner System for production control, Work Structuring, PPC (percent planned completed)*

ABSTRACT

The goal of the thesis is to give recommendation in project management by using lean construction concepts through any tools like last planner system for production control and work structuring to increase reliability of project planning. It took by identify the potential value of lean construction ideas for XYZ project when examined at the project levels. This thesis is an attempt to identify whether there is a basis for lean construction thinking within XYZ project.

XYZ project has complicated problems and delay caused by any factors like poor material, poor manpower, poor equipment, non reliability project planning, poor subcontractor performance, not effectively internal coordination, etc. The solution to avoid project from delay are doing project acceleration by overtime and shifting strategies. Overtime implementation will eliminate time duration imperatively and accelerate working process until 30%. Either with shifting strategy can reduce working time and accelerate any works until 50% from the planning.

According to the LCI (*Lean Construction Institute*) reports stated by Abduh (2007) that waste in construction industry is amount of 57%, it supported by identification results of 31 non value added activities that become potential source of waste in XYZ project. One of solution to reduce waste is create reliability of project planning through last planner system for production control and work structuring. Reliability of project planning indicated by PPC (percent planned completed) is amount of 77.78%, it means that non added value activities can be reduced during progress runs significantly. The value of PPC informs that waiting time of project milestone can be reduced until 52% since from August to December 2012 by task completed every month.

Design of product – process (*supply chain, product, process & operation*) on remaining work gives positive impact toward QCDS (*quality, cost, delivery time & safety*). However, it gives negative impact on cost performance caused by there is additional cost. Design of product – process creates on time schedule in every project activity by 12 breakthroughs that were implemented in project site.

Keyword : *Lean Construction, Waste, Last Planner System for production control, Work Structuring, PPC (percent planned completed).*