Bringing industry professionals together at the
Singapore Construction Productivity Week

Be recognised for your productivity efforts at the
Construction Productivity Awards

Telescopic handler
The answer to today’s work demands on site
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CEO’s Message

Dear Readers,

Happy New Year! Traditionally, this time of the year is one for reflections and goal-setting as we look forward to the year ahead. However, in order to move ahead, we must first establish where we have been and where we would like to go. In June 2010, we launched the S$250 million Construction Productivity and Capability Fund (CPCF). This fund is aimed at helping construction firms in three key areas: manpower development and skills upgrading, technology adoption as well as capability building. Since its inception six months ago, we have already approved more than 1,000 applications to the tune of S$4.5 million, benefitting more than 300 firms*. There is still much scope for many more firms in the industry to upgrade and if you are part of an organisation that is keen to boost productivity along the whole construction value chain, do approach our Construction Productivity Centre and we’ll see how we can help you.

It has been said that education can change the world. Knowledge leads to insight, application and problem resolution, which in turn lead to improvement. In this issue, we focus on manpower development and skills upgrading, which are key to raising productivity. Find out how some firms’ investment in training and upgrading the skills and competency of their construction personnel have paid off.

I would like to take the opportunity to highlight the pioneering role that the BCA Academy plays in providing training to level up the entire construction workforce’s site productivity. Some of the courses that are geared towards productivity include training on prefabrication design and erection, system formwork set-up, and the operation of lifting and hoisting plant and equipment. Do keep a lookout for new courses on the latest technologies, such as Building Information Modelling (BIM), which facilitates the exchange of building information amongst different industry professionals using 3D digital formats.

Looking ahead at 2011, BCA will be launching the new Construction Productivity Awards (CPA) to recognise outstanding firms and industry practitioners for going the extra mile to achieve productivity improvements at the firm and project levels. We hope that such recognition would encourage more firms and individuals to take proactive steps in improving productivity. If you think that you are one of them, do come forward and be recognised for your efforts.

Also in the pipeline is the inaugural Singapore Construction Productivity Week (SCPW) in April. SCPW is a 3-in-1 national productivity event for our industry: a conference for sharing of best practices, an exhibition to introduce the latest technologies and innovative products, as well as a “Skilled Builder and Building Information Modelling (BIM) Competition” targeted at tradesmen and BIM practitioners. It is an excellent opportunity for building professionals to learn from experts and case studies on the best practices, latest technologies and skills that improve productivity, which will in turn lead to labour and cost savings.

Come join us on our productivity journey. Together, we can develop an advanced and competitive construction industry that is anchored by progressive firms and a highly skilled and competent workforce.

Dr John Keung,
Chief Executive Officer

* Statistics as at 5 Dec 2010
Could you share with us your thoughts on how to achieve high productivity in construction projects?
There is no best system that can guarantee the highest productivity level. There are many factors to consider with regard to site work such as the size and weight of prefabricated units, available manpower and crane capacity, site yard constraint, site access, the targeted accuracy and quality standard as well as total cost. All these factors need to be balanced.

We have an internal division to simulate several feasible solutions to site challenges, and after many rounds of discussion and improvement, we will propose the idea to the site construction team. Consultation with site construction team members – who have a better feel of site constraints - will take place before work begins to further refine the solutions.

How does Shimizu encourage innovation among its staff to improve construction productivity?
Shimizu formed a Committee of Construction Process Innovation in 2000. The committee is held six times a year following a PDCA (plan-do-check-act) cycle, which is a four-step problem-solving process typically used in business process improvement. The Committee has five sub-committees conducting the productivity enhancement exercises as follows:

1. **Order Entry Performance Enhancement**, an activity which enhances the presentation of construction bidding proposals through strategic front-loading and ensures cost competitiveness.

2. **Drawing Performance Enhancement**, which improves the design process and utilises Building Information Modelling (BIM) technology.

3. **Cost Data Utilisation** helps to reduce expenditure via cost data utilisation.

4. **Site’s Productivity Improvement** refers to the improvement of site operation and site management.

5. **Building Equipment Installation Productivity Improvement** looks into improving the productivity of building equipment installation in a building project.

We expand measures developed by the committee to all branches and construction sites. This helps to improve site productivity as well as reduce cost each year.
Mr Conrad Wong is currently the Vice-Chairman of Yau Lee Group and Managing Director of Yau Lee Construction. He is also President of the Hong Kong Construction Association, member of the Construction Industry Council, Director of the Hong Kong Green Building Council, and Honorary Chairman in the Advisory Committee (Industry) of Cooperative Education Centre at the City University of Hong Kong.

What is the practice in Hong Kong to monitor the manpower usage on site?

In Hong Kong, 90% of the construction workers are locals and all construction workers are required to register with the Construction Workers Registration Authority. The principle contractor of Government sites is requested to submit the “Monthly Return on Construction Site Employment Statistics for the contract” to the Census and Statistics Department.

In addition, a biometric authentication technology smart card identification system has been widely adopted in public projects to provide accurate data on the labour deployment and access control on site. The system is able to monitor manpower usage by tracking registered workers on site and generate regular reports for main contractors’ submission to the government. The data covers all persons employed by the contractor, the nominated subcontractor and his subcontractors.

When was precast concrete adopted in Hong Kong? How does the use of precast lead to higher productivity and quality in Hong Kong?

Before the 1980s, Hong Kong was using the conventional construction system, which posed many problems. These included water leakage issues, high maintenance cost and poor quality concrete finishes. It was also labour intensive with associated safety and environmental concerns as there was extensive use of timber materials for temporary works.

By the mid-1980s, post-installation of precast facades was introduced in public housing projects. Beginning the early 1990s, Hong Kong adopted the semi-precast construction system and combined it with the pre-installation of precast facade construction method.

There are many advantages to the semi-precast construction system, namely:

- **Enhanced Productivity**
  The use of precast elements reduces in-situ concreting activities and substantial wet trades on site. As it only involves assembly of precast elements and installation of panel formwork with small amount of concreting works, timely completion of the construction project is ensured. Furthermore, it is less affected by inclement weather. Upon completion of the structural frame of building blocks, other works such as external finishes and window frame installation can be done concurrently, which helps to mitigate critical path activities and programme delays.

- **Better Quality to End User**
  Quality is assured as precast elements are prefabricated at factories using the factory management system, which requires a tighter tolerance to ensure better workmanship. Water leakage issues are also eliminated through the monolithic casting of the facade with the floor slab, including the steel system formwork. Window frames are cast at the factory which also helps minimise the water leakage problem, thus reducing long-term maintenance costs. In summary, the precast production process can be closely monitored in a factory with a team of trained quality control personnel before the product is delivered.

- **Enhanced Health & Safety for Workers**
  The semi-precast construction system is much safer because it can reduce a large amount of work, such as reinforcement fixing, formwork erection and concrete pouring at height at construction sites. The steel wall form design provides a safe working platform for workers.
The Building and Construction Authority (BCA) will be organising the Singapore Construction Productivity Week to promote the innovative use of technology and methods to improve construction productivity.

With a slew of exciting events lined up, the week-long programme promises to be an excellent platform for industry professionals to share their knowledge on construction productivity, as well as learn from the best practices and new technologies. The event also provides an opportunity for tradesmen to reinforce their key skills for productivity gains.

The Singapore Construction Productivity Week will kick-off with the challenging and exciting Skilled Builder Competition (25-26 April). Participants will pit their skills against each other in various trades such as telescopic handler and crane simulator operations, as well as system formwork and drywall installation.

By encouraging tradesmen to participate, BCA hopes to urge companies to nurture groups of tradesmen who specialise in modern construction technology, which will in turn help to improve construction productivity. The company with the best performance in the various trades will be crowned the overall winner.

There will also be a Building Information Modelling (BIM) competition, where designers from various disciplines such as architecture, civil and structural engineering, mechanical and electrical engineering and construction will compete to present the best model that can help enhance productivity.

Also in the line-up is the Build Smart Conference (27-28 April), where participants can look forward to learning tips from overseas and local experts who have successfully adopted productive methods of construction in the areas of precast and prefabrication, BIM and information technology, construction technology and procurement, and management.

Another event to be held during the Singapore Construction Productivity Week is the BuildTechAsia 2011 Exhibition (27-29 April), a trade show for exhibitors and visitors to network with industry players for business opportunities in the region. Technology and equipment, which may help to improve productivity, will be showcased at the event. The exhibition is expecting about 5,000 to 7,000 visitors from the region.

To conclude the week of events, BCA will be organising site tours on the final day of the Singapore Construction Productivity Week (29 April) to some of the projects that have won the Construction Productivity Awards or adopted productive methods of construction.

The Singapore Construction Productivity Week will be a week of exciting and interesting events for everyone in the construction industry. Please log on to www.bca.gov.sg for updates on the inaugural Singapore Construction Productivity Week.
Brought to you by the Building and Construction Authority (BCA), the Singapore Construction Productivity Week is an excellent platform for industry professionals to share their knowledge on construction productivity as well as learn about best practices and new technologies.

Watch out for these events!

**April 25-26**  
Skilled Builder and BIM Competition  
@ BCA Academy, 200 Braddell Road

**April 27-29**  
BuildTechAsia 2011 Exhibition  
@ Singapore Expo Hall 3

**April 27-28**  
Build Smart Conference  
@ Singapore Expo Conference Hall

For more information on the inaugural Singapore Construction Productivity Week, log on to [www.bca.gov.sg](http://www.bca.gov.sg).
Traditional RC roof construction usually requires the in-situ laying of waterproofing material, an insulating layer and finally a layer of concrete screed. This method is both labour-intensive and time consuming, and cannot be carried out in inclement weather.

Uniseal Waterproofing Pte Ltd, an innovator and one of the leading specialists in waterproofing works, has developed and patented a precast roofing slab system to save labour and time. These slabs are similar to RC tiles of about 0.25 m² each, with a built-in insulation layer and stumps beneath to allow effective drainage of water. Uniseal Waterproofing is now expanding its capability by using PIP funding to automate the production of these precast slabs.

Here’s a look at the benefits of precast roofing slabs over the conventional RC roofing system.

<table>
<thead>
<tr>
<th></th>
<th>Conventional Roofing System</th>
<th>Precast Roofing Slabs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On-site Work</strong></td>
<td>Extensive wet works required. Construction is both labour-intensive and time-consuming.</td>
<td>No wet works required. Slabs can be easily and quickly installed.</td>
</tr>
<tr>
<td><strong>Curing Time</strong></td>
<td>May have to allow up to 28 days of curing time before roof is usable.</td>
<td>Roof is ready for use immediately after installation of slabs.</td>
</tr>
<tr>
<td><strong>Quality Control</strong></td>
<td>Difficult to control standard of workmanship on-site.</td>
<td>Stringent quality control ensured during the manufacturing process of precast slabs.</td>
</tr>
<tr>
<td><strong>Maintenance</strong></td>
<td>Roof needs to be hacked when carrying out post-construction maintenance works.</td>
<td>Slabs can be removed and replaced easily, as required.</td>
</tr>
<tr>
<td><strong>Special Finishes</strong></td>
<td>Special finishes have to be applied after construction of roof.</td>
<td>Precast slabs can be manufactured with specific finishes as required by the project.</td>
</tr>
</tbody>
</table>

**AUTOMATION OF PRECAST ROOFING SLAB PRODUCTION**

The automated production facility will be housed in a container. It is like a mobile slab factory that can be transported to sites where large quantities of precast slabs are required, thus further saving on logistics and material transportation costs. With this, Uniseal can even handle projects in neighbouring countries with greater ease!

It is a compact, space saving mobile slab factory that allows Uniseal to project its manufacturing capability of the slabs on-site and to neighbouring countries.

Precast roofing slab with timber finish.
Imagine a World...

Where complex buildings are constructed quickly, efficiently, and cost effectively. Where aesthetics and construction integration come together to result in greater site productivity gains.

For these scenarios to be made possible, an integrated and technologically advanced construction industry, supported by a competent workforce, needs to be in place. It is imperative that consultants and builders are forward looking in adopting best practices and innovative ideas to increase construction productivity.

We know that such firms and individuals are out there. If you are one of them, come forward and be recognised for your labour-efficient designs, construction methods, as well as excellent project planning and coordination skills in enhancing productivity.

Submit your nominations for the inaugural Construction Productivity Awards (CPA) today.

You can participate in one of the following categories, or all of them:
• Projects
• Best Practices and Innovations
• Value Added Productivity (VAP)

The inaugural CPA will be given out during the BCA Awards Night 2011 in May 2011.

Interested to find out more? Read on.
CPA - Projects (closing date: 15 Jan 2011)

The CPA-Projects category is for project teams that demonstrate a productivity-centric focus in their construction development projects beginning from the design to the end of construction.

The award aims to:
(i) Encourage designers to come up with labour-efficient designs;
(ii) Encourage project teams to adopt labour-efficient construction methods; and
(iii) Recognise project teams for their excellent project planning and coordination in enhancing productivity.

The awards will be given in nine sub-categories:
(i) Residential Landed Buildings Category
(ii) Residential Non-landed Buildings Category (for projects with Gross Floor Area of less than 25,000m²)
(iii) Residential Non-landed Buildings Category (for projects with Gross Floor Area of more than or equal to 25,000m²)
(iv) Commercial and Office Buildings Category
(v) Institutional Buildings Category
(vi) Industrial Buildings Category
(vii) Mixed Development Buildings Category
(viii) Additions & Alterations / Upgrading Buildings Category
(ix) Civil Engineering Category

Building projects will be assessed based on project buildable design score, constructability score, simplicity for construction, design and construction integration and aesthetics.

Civil engineering projects will be assessed based on design for ease of construction, construction technology and site management, design and construction integration and innovative designs and products.

CPA - Best Practices and Innovations (closing date: 15 Jan 2011)

The new CPA – Best Practices & Innovations will be awarded to organisations that have developed or introduced, and have implemented best practices or innovative ideas (i.e. building products, construction methods, work processes or equipment) in improving construction productivity. Productivity Improvement Projects (PIP) under the Construction Productivity and Capability Fund (CPCF) can also be considered for the award.

This award aims to:
(i) Recognise consultants and builders for their best practices & innovative ideas in promoting construction productivity;
(ii) Encourage consultants and builders to be forward looking in adopting best practices & innovative ideas to increase construction productivity; and
(iii) Promote a creative culture in the construction industry to develop and use best practices & innovation to achieve productivity gains.

Entries would be assessed based on productivity impact, cost effectiveness and creativity.

CPA - Value Added Productivity (VAP) (closing date: 15 Feb 2011)

The CPA - VAP award serves to raise awareness and encourage builders to increase their productivity by taking ownership in monitoring their own productivity progress. The VAP awards give recognition to progressive firms which strive towards higher productivity and encourage builders to come on board the productivity movement in the construction sector.

The award will be given in two sub-categories:
(i) Best VAP Builder; and
(ii) Best VAP Improvement Builder

Firms would be assessed based on the submitted audited computation of VAP figures (using BCA’s VAP calculator) with reference to their recent financial statements.

For more information or to download the application forms, please visit www.bca.gov.sg.
Jointly organised by BCA, SCAL, Building Smart and SPHERE Exhibits, the Skilled Builder and BIM Competition will take place during the Singapore Construction Productivity Week. The competition aims to highlight the importance of using the right skills to increase construction productivity.

Here are the details of the competition:

<table>
<thead>
<tr>
<th>Skills category</th>
<th>No. of participants per team</th>
<th>Duration of competition per team</th>
<th>Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telescopic handler</td>
<td>1</td>
<td>15 min</td>
<td>$500 for champion, $250 for runners-up</td>
</tr>
<tr>
<td>Crane simulator</td>
<td>1</td>
<td>15 min</td>
<td>$500 for champion, $250 for runners-up</td>
</tr>
<tr>
<td>System formwork installation</td>
<td>4</td>
<td>2 hours</td>
<td>$2,000 for champion, $1,000 for runners-up</td>
</tr>
<tr>
<td>Drywall installation</td>
<td>3</td>
<td>2 hours</td>
<td>$2,000 for champion, $1,000 for runners-up</td>
</tr>
<tr>
<td>Building Information Modelling (BIM)</td>
<td>4</td>
<td>2 days</td>
<td>$3,000 for champion</td>
</tr>
</tbody>
</table>

The company with the best overall performance in the various categories would be crowned the overall winner.

Registration will open in January 2011. For more updates, please log on to www.bca.gov.sg.
How important is manpower training to the progress of your company?
Although training workers and sending them for courses require time and money, we believe that employees are our greatest asset and we need to invest in them. When our people are adequately trained and their skills and knowledge are continually upgraded, we are empowered with a more stable and qualified workforce, which helps the company to progress and compete more effectively. Being committed to providing training opportunities for our workers has also conveyed a strong positive message that the company values them, which boosts workers’ loyalty to our company.

What are the training plans you have in place for your staff? What courses do you encourage your staff to attend and why?
Our employees go through a mix of technical and non-technical training, provided in-house or by external training providers. We have also created a training assessment matrix where we monitor training records and send our staff to courses according to their job designation and work scope.

For example, workers are upgraded to enhance their competency in their trades. A project manager, on the other hand, is required to attend a series of knowledge-based courses, such as Risk Management, provided by the BCA Academy. Professionals and academics from NTU and NUS are also engaged to conduct internal electrical and fire protection seminars for our engineers.

In August this year, we embarked on management training for directors, managers, and heads of departments to further develop their leadership capabilities. During the training sessions, they gained insights to effective performance management skills such as conducting appraisals, coaching, and giving feedback.

How many members of your staff have undergone these training programmes so far?
More than 80 percent of our employees have undergone or are now undergoing the training programmes we have tailored for them.

How do you fund these courses?
We apply for existing funding schemes such as SPUR and SDF whenever it is possible. However, even in cases where there aren’t any, we will still send deserving staff for training.

What are the benefits that the company has gained so far through training your employees?
By undergoing training, our employees are well equipped with the latest know-how in the industry. As such, they perform better at work, closing any skill or knowledge gap that they may have previously had. This has improved overall productivity and work quality.

The benefits aren’t quantifiable, but are critical to the success of the company. For example, staff motivation has increased as employees see that their knowledge and capabilities are being developed. As a result, there has been a reduction in staff turnover.

More significantly, higher staff motivation has manifested in excellent work performance that exceeded client expectations. This has helped to build up the employer brand. Motivated workers can also act as brand ambassadors. Establishing a good brand name is crucial in our efforts not only to enhance business opportunities, but also to attract more local talent to join us and grow our human capital.

What are your future plans for the continual upgrading of your employees?
We are continually on the lookout for relevant courses, including those offered by BCA Academy. We have increased spending on training this year and will continue to do so.

Have you tapped into the array of incentive schemes under the Construction Productivity and Capability Fund (CPCF)? How do you think the CPCF Scheme can enable DLE in intensifying your manpower development plans?
Yes. We have sent in applications for six of our local employees and two foreign employees to obtain funding support for the required skills assessment before they can qualify to be CoreTrade certified foremen in electrical wiring installation. We think SMEs like our company, which are proactively ramping up work productivity through the deployment of a highly skilled workforce, will be able to benefit from the scheme, which helps defray training costs.
In Conversation with Simon Leong, Project Coordinator DLE M&E Pte Ltd

46-year-old Simon has 18 years of experience in the mechanical and electrical trade. Starting off in the industry as a young apprentice, he is now a project coordinator at DLE M&E Pte Ltd and is in charge of supervising M&E works. Simon is currently undergoing BCA Academy’s National Building Qualifications (NBQ) in Supervision and Coordination of M&E Works.

Is undergoing the National Building Qualification NBQ in Supervision and Coordination of M&E Works helpful in the course of your work?
Yes, of course. In the past when I first stepped into this trade, I used to just follow what my supervisor taught me or asked me to do. In other words, I was “trained” to do the job without understanding why it has to be done in a particular way. It was only after undergoing this course that I started to gain better understanding of the work I do daily. I am now able to perform my job more confidently and efficiently.

Beyond technical skills, what else have you gained from your upgrading?
Besides gaining a deeper understanding of the technical aspects in my job, the course also has modules to improve my “soft skills”. For example, I am able to apply what I learnt at the English and Communication Skills module at work to give clearer and more concise instructions and to communicate more effectively. The course also has modules that teach us how to manage site problems. I also learnt about the importance of scheduling and target-setting, which is very helpful in my work as a project coordinator.

Simon also shared that it was initially quite tough to undergo lessons three times a week while working full time, but he said it was all worth it. Just a few months short of completing this two-year training programme, Simon is already motivated and eager to apply the knowledge in his work. He is confident that with better qualifications from continual training, he can look forward to more advancement opportunities in his company.

What is the Construction Productivity and Capability Fund?
The Construction Productivity and Capability Fund (CPCF) is a BCA-driven initiative to improve the construction industry’s productivity and capability. Amounting to S$250 million, the CPCF covers three key areas: Workforce Development, Technology Adoption and Capability Building.

What is funded under Workforce Development?
Other than enhancements to the existing BCA-Industry Built Environment Scholarship scheme, the Workforce Training and Upgrading (WTU) scheme under the CPCF co-funds the costs of selected skills assessment and training courses for workers (both local and foreign workers). Presently, other than CoreTrade familiarisation courses and skill assessments, there are a total of 17 supervisory courses supported under CPCF, with more productivity-related courses in the pipeline.

How much funding is available?
The WTU scheme co-funds up to 80 percent of the course/training/assessment fees for eligible applicants. The firms sponsor the remaining fees.

For more information on the WTU scheme, please contact Ms Angelic Loh Suet Ying at 6325 2096 or email loh_suet_ying@bca.gov.sg

For more information on the incentive scheme under CPCF, please call the CPCF toll-free hotline at 1800-325 5050.
What staff development goals do OSK Engineering have?
To stay competitive in the industry, we engaged a management consultant firm to work with us on a major restructuring exercise in 2007. One of our major goals then was to raise our productivity. We aim to achieve higher productivity by expanding and strengthening the pool of our workers through skills upgrading and training.

Retaining trained workers who perform well is also at the top of our agenda. Therefore, we are currently working with our management consultants on initiatives to create a people-oriented corporate culture that rewards good performance and instils a sense of belonging among our workers.

How does training your workers and creating a people-oriented corporate culture benefit your company?
With the new commitment towards training our workers and rewarding those who perform well, we have seen positive results in terms of higher skilled and motivated workers who have helped to bring the company’s productivity to a higher level. We have found that well-trained workers, besides having higher productivity, are also more disciplined, which has a positive impact on our company’s image.

All of these have given us the ability and confidence to tender for bigger scale projects such the Integrated Resorts projects where OSK provides sanitary and plumbing services. We’ve managed to clinch the projects and I am proud to say that we have since delivered services to our customer’s satisfaction.

In your opinion, why is it important to train your workers?
Most of the foreign workers who were brought in to work on our projects would have to rely on on-the-job-training to improve their trade skills. To raise productivity, we decided to set up an internal training centre to train and impart such plumbing skills to them. The workers will undergo plumbing training for four or five days before starting work on site. We find that they are able to perform better as a result.

How many workers have undergone the training courses so far?
All our newly recruited workers have undergone our Plumbing Course and up to 40 percent of our existing workers who are already skilled are attending or have attended relevant upgrading courses. For example, four of our managers have undergone the ITE “Train the Trainer” program to be better prepared to conduct in-house training. Two of our employees have also recently completed their studies at the BCA Academy and have achieved the Builder Certificate in Plumbing and Pipe-fitting.

Have you tapped into the Construction Productivity and Capability Fund (CPCF) to increase your productivity?
We have made an application under CPCF’s Productivity Improvement Project for the use of a new piping system for our new project in NUS New Town. Our workers are currently undergoing training in batches to familiarise themselves with the installation of this piping system.

We have also applied to the CPCF’s Workforce Training and Upgrading (WTU) scheme in order to fund our workers’ skills assessment under the CoreTrade Scheme. Of course, we are also keen to explore suitable courses supportable under the WTU scheme in order to send our workers for training progressively.

OSK Engineering Pte Ltd is a registered contractor with BCA, specialising in Plumbing and Sanitary Works. OSK is also a licensed builder with BCA under the Class 1 grade for General Building Works.
Interior drywall installation is one of the fastest methods of putting up a partition wall. The speed of installing a drywall is three to four times faster than the conventional masonry system, as the drywall is considered lightweight. Because of this, the drywall is widely used in the commercial sector to build offices.

Drywall installation, as its name implies, is a dry method of installation, devoid of using water in wet trade such as brickwall construction. This creates a clean, dry and dust-free working environment.

Drywalls have great aesthetic appeal as well. The joints are usually seamless when plastered properly. The surface is crack-free, which allows for ease of decorating with paint. Another advantage of using the drywall is its excellent performance in terms of fire-rating, thermal and sound insulation.

The essential skills sets for drywall installation can be taught in five to seven days. Once a new tradesman has undergone the training and mastered the basic installation skills, he can independently follow-up to install the drywall on his own with minimum supervision.

The training course offered by the BCA Academy comprises workshop practices, classroom lectures and video instructions. It teaches general knowledge on ceiling and drywall installation as well as offers hands-on practice on setting out of floor and ceiling tracks and installation of stud-type and sandwich panel type drywall systems.

For more information on our interior drywall installation course, please call 6248 9999 or visit our website at www.bcaa.edu.sg
The BCA Academy provides training courses for construction workers who wish to learn more on operating the telescopic handler competently. The Academy’s telescopic handler training programme covers 41 hours of training over a period of six days. A trained telescopic handler operator who has the knowledge and skills to operate the machine can contribute significantly to increased productivity levels over time.

Further details of the training programme can be found on the BCA Academy’s website at www.bcaa.edu.sg/courses_programmes.aspx.
The MechC Scheme: A journey of productivity with Acacia Engineering and Top Pave

The Construction Productivity and Capability Fund (CPCF) aims to help firms build up their capability, develop their manpower and adopt technology in their processes. This month, we take a look at two progressive firms who have successfully made use of the schemes under CPCF to mechanise their work processes and upgrade the skills of their workers.

Acacia Engineering

Acacia Engineering is a specialised sub-contractor for sanitary, plumbing, gas pipe and sewerage works. Their clients span across many different companies like developers and main contractors. Acacia has also undertaken various kinds of projects, comprising condominiums, schools, hotels, and factories.

The construction industry is challenging and competitive. Mr Tok Kiah Tong, Managing Director of Acacia Engineering Pte Ltd, decided to undertake the productivity journey so that they can stay ahead of their competitors and at the same time, stay committed to deliver high quality projects.

Having the right tools and technology to do the work is only part of the equation; another equally important factor is getting the right people. Striking a balance between these two factors is a critical act that every project manager should do to improve site productivity.

This is why Acacia Engineering believes in investing in the right equipment and training their workers. The firm made use of the various incentive schemes under CPCF to purchase equipment and train their workers.

The firm bought two scissors lifts with the Mechanisation Credit (MechC) scheme and did away with the hassle of erecting and disassembling the scaffolds. The scaffolding method gets even more troublesome when dealing with works at different heights. By reducing the number of work processes, they were able to improve their installation efficiency and reduce the number of workers on site.

“No matter what job or what type of industry, the need to improve productivity is the ultimate goal... Skilled workers do the job faster, make fewer mistakes, and contribute to the company’s bottom line. A skilled operator of a machine will be more efficient compared to three workers carrying out the same task without the help of equipment.”

Mr Tok Kiah Tong
Managing Director
Acacia Engineering Pte Ltd
Precast roofing slab with timber finish

Top Pave Pte Ltd is currently involved in upgrading works for overhead bridges which require access to works at height. To carry out such operations efficiently, they made use of the WTU fund to send their workers for CoreTrade skill assessments.

Mr Andy Kuan, Contracts Director of Top Pave Pte Ltd said, “To ensure that our operations are productive, our project managers and site managers will draw up plans in order to maximise the efficiency of machinery and equipment for the projects. Only our skilled workers are deployed to carry out the main work with unskilled ones deployed to support them. The latter group helps in carrying out secondary work and is usually deployed as drivers, banksmen and technicians, amongst others.”

Scaffolding has always been the conventional method for bricklaying, plastering, and cladding installation, amongst others. By substituting scaffolding with a boom lift, Top Pave makes the work less labour-intensive and more productive. Mr Andy Kuan commented, “Investing in a boom lift is a long-term and high-cost decision. However, we are able to capitalise on the MechC Scheme for long-term benefits.”

Top Pave Pte Ltd invested in an electric boom lift through the MechC scheme.

Top Pave Pte Ltd was established in 1990, and started out in the general building and interior finishing field. Since their humble start-up, they have ventured into other kinds of construction works. They are now a specialist in civil, structural and architectural works. The types of projects that they engage in include both industrial and commercial ones.

For more information on the various incentive schemes:

Mechanisation Credit Scheme  
Contact: Ms Tan Mui Kheng  
Tel: 6325 5067  
Email: tan_mui_kheng@bca.gov.sg

Workforce Training and Upgrading Fund  
Contact: Ms Angelic Loh  
Tel: 6325 2096  
Email: loh_suet_ying@bca.gov.sg
Ride on the productivity wave by signing up for these courses

Construction Productivity and Capability Fund (CPCF) courses

- Certificate in Interior Finishing Coordination
- Certificate in Pavement Construction and Maintenance
- Certificate in Precast Concrete Construction Supervision
- Certificate in Waterproofing Supervision
- Certificate in Building Measurement
- Certificate in Geotechnical Instrumentation for Supervisors
- Certificate in Levelling and Setting Out
- Certificate Course for Structural Steel Supervisors
- NBQ in Project Supervision
- Higher NBQ in Project Supervision
- Advanced NBQ in Project Supervision
- NBQ in Supervision and Coordination of M&E Works
- Higher NBQ in Supervision and Coordination of M&E Works
- Advanced NBQ in Supervision and Coordination of M&E Works
- NBQ in Operation & Maintenance
- Higher NBQ in Operation & Maintenance
- Advanced NBQ in Operation & Maintenance

Contact:
BCA Academy
Tel: 62489999, Email: bca_academy@bca.gov.sg
CONSTRUCTION PRODUCTIVITY AND CAPABILITY FUND (CPCF)

TECHNOLOGY ADOPTION

MECHANISATION CREDIT
Provides assistance to companies to defray up to 50% (S$20,000) of machinery cost

PRODUCTIVITY ENCHANCEMENT VOUCHER
Provides assistance to companies to engage consultants to achieve productivity gains

PRODUCTIVITY IMPROVEMENT PROJECTS
Encourages companies to build up their work process to achieve productivity gains

BUILDING INFORMATION MODEL FUND
Provides assistance to companies to incorporate BIM into their work processes to offer new value added services

FOR MORE INFORMATION ON THE INCENTIVE SCHEME UNDER THE CPCF
Please Contact: CPCF Toll-free Hotline: 1800-325 5050