

Review of TMCs

**From: Project of the Basic School System and Adolescent Girls'
Program: Modular second chance education with livelihood skills
and gender empowerment.**

**5th Phase: JUNE 2011 – 31 MAY 2015
Implementer: CENTRE FOR MASS EDUCATION IN SCIENCE (CMES)
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by Sandra Rothboeck
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List of Acronyms

ABS	Advanced Basic Schools
AGP	Adolescent Girls' Program
AT	Assistant Teacher
BS	Basic School
BSS	Basic School System
BSTI	Bangladesh Standard and Testing Institution
CMES	Centre for Mass Education in Science
CWC	Community Working Committee
GPM	General Production and Marketing
ILO	International Labour Organization
UO	Unit Organizer
OT	Organizer Trade (TMC)
RPL	Recognition of Prior Learning
RTC	Rural Technology Centre
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Agency
SEY-WO-SE	Self-Employed Youth and Women's Social Enterprise (programme and brand)
ST	Senior Teacher
TIG	Technology and Income Generation
TMC	Technology Management Centre
TTRC	Technology and Training Resource Centre

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EXECUTIVE SUMMARY

In June 2015, an evaluation of Technology Management Centres (TMCs),¹ the commercial wing of the project 'Basic School System and Adolescent Girls' Program: Modular second chance education with livelihood skills and gender empowerment' was carried out to inform SDC, SIDA and CMES about the current status of TMCs and to assess, if and under which conditions TMC's can operate independently and without any external funding. A vision for further directions and a sustainability plan was developed as a part of the assignment. Findings and recommendations provide the required guidance for the design of the new phase VI for the commercial wing of TMCs.

The evaluation of TMCs includes analysis of existing reports for TMCs and General Production and Management Unit of CMES (GPM) and visits to 5 TMCs, as well as detailed discussions with GPM, RTC and TMC staff, clients and customers, graduates, local government officials and parents. It is important to highlight that TMCs and GPM, as they run now, are young entities, which had to transit and be built independently from the CMES BSS programme during Phase V. They are yet to get registered as interdependent legal entities. Such transitions take time, as staff too had to make that mental shift to start thinking and operating 'business like'. Further, the context within which TMCs operate is challenging, since they are located in poor districts, where markets are limited and often not very diversified or dynamic. Developing an ecosystem for entrepreneurship is challenging and it is doubtful that sustainability for TMCs can be achieved quickly. The evaluation results are summarized below:

Assess, how TMCs operate and whether they meet their objectives

Following the recommendations from Phase IV, the commercial entities TMCs and GPM, which operate under the brand SEY-WO-SEY,² have split from the Basic School System (BSS) programme and have been set up as independent entities with own equipment, housing and dedicated staff (3 per TMC). TMCs have clarity about their roles and responsibilities, to act as marketing, up skilling and coordination entities, which support BSS graduates to generate sustainable income as enterprises. All TMCs have basic equipment, provide services as intended to a steadily growing number of BSS graduates. They also support an increasing number of already established entrepreneurs, former graduates, who have their own client base but use TMCs for specific advice, design support or for machinery and equipment they do not have in their own enterprise. While TMCs taken significant steps towards achieving the overall objective and functions, existing equipment and capacities require further upgrading and professionalization to ensure that TMCs can fulfill the role of a competent and relevant service provider.

Are principles of business applied in the running of TMCs?

TMCs and GPM have embraced business principles and logic and orient their efforts to reach financial viability. There is a focus on expanding sales and markets, development of client base and steadily creating products to remain attractive. There is a need to further build capacities, by recruiting new staff and training TMC and GPM staff on various business related principles, which also include actual costing of expenditure, pricing of products and fixing of margins.

¹ A TMC acts as a skills upgrading and marketing-business entity, which acts as an interface between graduates who leave the Basic Education Programme of CMES and joining TMCs to get ready for running their own enterprise. TMCs provide skills upgrading, production support and marketing services. It also procures materials, does the costing for products and seeks to be financially self-sustaining in the long run. Each cluster of CMES comprises of Basic Schools, Advanced School Programme of which all are managed and supervised by the Rural Technical Centre (RTC). Earlier, under each RTC, there was also a TMC. Today, TMCs are collaborating as independent entities with RTCs. For more details about TMCs role in relation to CMES' programme see Annex 4.

² SEY-WO-SEY: is the brand, under which CMES designs and produces and sells the products. GPM is in charge of promoting SEY-WO-SEY at the national and international level.

Financial intelligence needs to be built within the organization, where data are continuously validated and monitored. TMCs have so far not included their salaries and operational expenditure into costing, which underestimates effective expenditure for running TMCs, while products were sold at prices too low to be cover expenses. Income and expenditure need to be re-worked and carefully monitored, keeping in mind the unaccounted costs (salaries TMC, partial support from RTC and operational costs). This is understandable, since these costs have been covered by development grants. TMCs have now to understand that these grants are to be covered as expenditure, which are covered through sales. TMCs need more strategic thinking about generating income as independent profit entities and require a business plan, which is based on sound market assessment, marketing/sales strategy, development of various sales channels for each product range, required investment and expansion plans for TMCs. Service and membership fees to be paid by graduate entrepreneurs should also be explored.

Assess Value add TMCs make to entrepreneurship of graduates

It seems that TMCs provide a value addition to the enterprises of graduates. While initially, graduates use TMCs for up-skilling, incubation and production support, more mature enterprises noted that they regularly use the TMC for specific services, for design support, some up-skilling or for use of quality machines they do not have in their units. The graduates also indicated that they would be ready to pay a service fee for such support. BSS and TMCs incubate many successful entrepreneurs. A survey should be conducted to better understand the status of entrepreneurs and to assess what services provided by TMC would further strengthen their performance.

Effectiveness of resource utilization

There is no doubt that the equipment and funding support for operational costs provided by the donor have been used effectively in the TMC units. It is important to emphasize that the investments made into the TMCs were very basic. The units are small and sparsely equipped, with very limited machinery and tools, which are required to produce high quality products. The TMC staff - Organizers Trade (OTs) and Training Assistants (TAs) - feel constrained in maintaining the quality required by the market, particularly at the national level, when they produce for GPM and Dhaka based quality markets. For TMCs and GPM to fulfill their role, more investments are required into both, human resources and into TMC and GPM infrastructure and operations.

Assess TMC performance overall and of 2 selected TMCs

TMCs have role clarity, follow defined procedures and documentation, which are necessary for quality production and running sustainable TMCs. To optimize quality production, there is a preference to produce centralized (within the premises of TMCs), which does not reflect the original vision of the project to have a decentralized production system. Quality processes are overhead heavy, since senior staff from TMCs and RTC is involved with detailed monitoring; it is doubtful that with expanding capacities and sales volume, such a process can be sustained, which is also once of the challenges faced by the staff. Quality documentation needs to be improved and systems developed which reduce the burden for quality assurance on staff.

After an initial assessment of systems, recalculation of incomes and expenditure and the mapping of the customer base, discussions were held with 3 TMCs and GPM, about the future and vision of SEY-WO-SEY and how TMCs and GPMs can attain financial viability. While there are indications that TMCs have developed effective systems and procedures and have gradually increased their sales volumes, it is difficult at this point to be able to conclude, by which time TMCs are able to reach financial viability or sustainability. Existing data and

absence of business plan, which indicates the direction and monitors performance of the business do not allow a clear conclusion. However, the consultants have developed various scenarios, which might help further planning and the development of a business plan. Overall, TMCs and GPM should come to a point by which their margins can cover their operational expenditure and re-investment requirements. At that point, they could be financially sustainable.

Assess prospects of TMCs and indicate strategic directions for its future

Based on the good progress made during the last project period in developing TMCs into commercial entities, and the 2 scenarios presented for Deuty and Damkura, TMCs and GPMs have the potential to become financially viable and can sustain operations. The way TMCs and GPM are set up and engage with enterprises is well defined and as mentioned earlier, it is now important for the organization to decide, how long TMCs would want to engage with graduates / enterprises when it comes to marketing support. This defines the size and complexity of TMC's and GPM's support services. Decentralized production will be the focus and systems need to be strengthened and put in place to ensure efficient production and quality systems. Staff also realized that a shift has to take place where TMC as a service provider takes on a role of a facilitator, coordinator and incubator, where fees might be charged. Such an approach also ensures that TMCs provide the required quality services so that graduates see a value add when they use and visit the TMCs.

Recommend, whether TMCs should be included in the next phase

It is strongly recommended that TMCs and GPM get further funding for at least another 3-4 years to reach the first milestone, namely covering operational expenditure and move towards being sustainable in the long run. Both GPM and TMCs need to expand, diversify and further professionalize their operations. This is but natural and could not have been done during Phase V, when TMCs were established. For TMCs and GPM to be vibrant carriers of the SEY-WO-SEY brand, which provide not only access to markets, but also professional quality services and machinery to the graduates as service centres, it requires further expansion of marketing and production infrastructure at GPM and TMC level. The amount of funding required depends on CMES' expansion strategy of the BSS programme and how long TMC plan to support enterprises with marketing support and b) what type for services they want to provide to graduates.

Sustainability vision for TMCs to be financially independent from external funding

Current social enterprises usually take advantage of various sources of funding, since they operate as hybrid business models, which combine profit with social impact. It is suggested that a similar approach is followed, where grants, loans and investments as possible funding sources are explored. It is to be highlighted that for phase VI, further grants are required to expand TMC infrastructure and marketing infrastructure as well as to build capacities in GPM and TMCs to reach break even point during the next phase. At this point TMCs and GPMs reach a stage where they can raise additional funds and investments to sustain their enterprises. Further, the consultants like to highlight that for up skilling and business incubation of fresh graduates coming from BSS, grant based funding might always be required.

Final Recommendations

It will be crucial, at this stage that CMES consolidates the vision and further strategizes expansion plans of BSS and aligns these with the sales projections for TMCs and GPMs. Then only, the objective of the SEY-WO-SEY brand can be achieved, which is to provide income opportunities for BSS graduate entrepreneurs. CMES needs to be clear how much and for how long TMCs should support enterprises. This determines quantity/scale of sales requirements of

TMCs/GPM. Further efforts need to be made to develop local capacities to run TMCs more independently. Challenges ahead will be how SEY-WO-SEY overall wants to grow into a more comprehensive business entity: this requires business planning, investments and capacity building. Besides further enhancing the business focus of staff, sound data collection and analysis capacities and financial 'intelligence' will be crucial capacities, which need to be further enhanced in TMCs and GPM. Particularly important will be that CMES engages a capacity building business consultancy unit, which supports and mentors this consolidation process.

1. Introduction:

1.1. Background

In 2011, the Centre for Mass Education in Science (CMES) has entered into Phase V of technical cooperation with SIDA/ SDC for the further expansion of their comprehensive Basic School System and Adolescent Girls Program (BSS). The overall goal of the CMES programme is to enable disadvantaged rural adolescents to pursue diverse options to improve their life and livelihood, by providing a combination of basic non-formal education with technical and life skills and making them appreciated members of their communities.

The overall objective of Phase V builds on earlier achievements and focuses on scaling up operations and replicating the intervention in 26 rural centres, of which 23 were funded by SDC/SIDA. While being centered around provision of educational, vocational training services for school drop outs, CMES has over the years, also developed a strong after-training support system which enables graduates to either access gainful wage employment or sustain themselves as micro entrepreneurs in the community. To support their entrepreneurial efforts, CMES has over the years developed various market-oriented initiatives, has established linkages with customers and developed products, which are produced by these enterprises and sold in the local and national market. These market led initiative has strongly benefited and supported the graduates in their school to work and to entrepreneur transition and are seen as being vital for BSS to remain relevant, since they are linked to the market realities and enable graduates to gain the confidence and capacities to turn into sustainable enterprises.

Acknowledging the importance of these economic activities, the end of phase IV evaluation clearly emphasizes that this effort, in order to meet the needs of an increasing number of graduates aiming for entrepreneurship, needs to be strengthened and split from the 'training and educational' effort. Such an initiative follows a different logic and needs to be commercially run in order to deliver the quality services and to reach financial viability over a certain period of time. The End of Phase IV report has the following recommendations, which were taken up in Phase V:³

- **A separate TMC in each CMES unit**
- **SEY-WO-SE strengthening within a decentralized system**
- **Community oriented management of TMC**
- **Partnership of TMC with local chambers and trade associations**
- **Partnership of TMC with local organizations**

Based on these recommendations made, the project design for Phase V dedicated one specific outcome, outcome 2, to the establishment of TMCs and the building of sales and production capacities within the TMCs. During the last 3 years, CMES has systematically split the commercial enterprise from the development/social programme. The TMCs have been set up to support graduates to further upgrade their skills for production and to have access to income generating opportunities as self-employed and micro entrepreneurs. Such centres are particularly important for remote areas, where CMES operates. The absence of dynamic markets and limited access to markets makes it often difficult to access income generating opportunities, which are sustainable. At the same time, while graduates have gained valuable

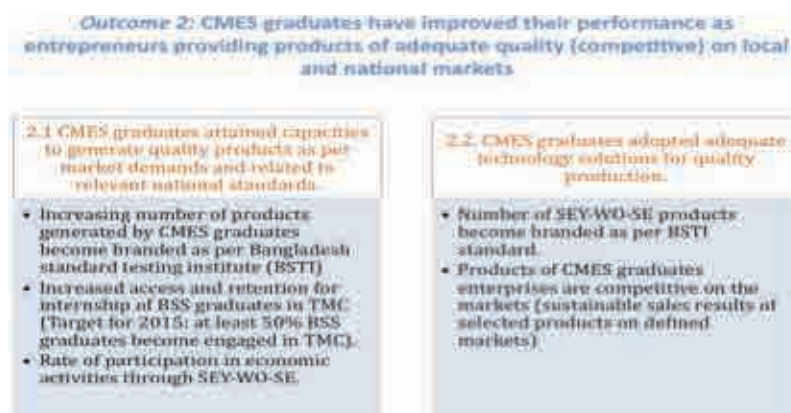
³ Project Document Phase V, Annexures 11, 13.

skills, they still require workplace related skills. CMES BSS training is designed to ensure that many graduates feel confident and therefore opt for self-employment (over 50%). After graduating from Adolescent Basic Education (ABS) and RTC, where they are already exposed to the world of work, it is argued, the graduates require mentoring and technical support to procure and execute orders. With CMES having an increased network at national and local levels with enterprises, businesses and markets, a SEY-WO-SEY brand will further secure orders and complement the local sales generated in TMCs. This support function enables graduates to access orders and produce marketable products.

1.2. Phase 5: Output and Outcome 2

As mentioned earlier, one entire component of the programme financed by SDC and SIDA during Phase V focused on the strengthening of the marketing, product development and quality process within CMES at all levels. TMCs and SEY-WO-SEY continued its efforts to develop infrastructure, equipment and systems which support TMCs and GPM to get closer towards financial profitability, while at the same time, remaining a skills upgrading and enterprise development initiative. Stronger marketing and sales activities were besides developing business related production capacity and quality systems, directly linked to the incomes of SEY-WO-SEY members.

The network between GPM and TMCs and the local and national markets was to be intensified and strengthened to ensure effective communication. The brand SEY-WO-SE required to be strengthened through marketing, sales and brand building efforts. Partnership development with existing networks, business partners and product development was to expand. Further, it was expected that through a stronger brand and order volume, more graduates would access and take advantage and seek support from TMC, which aims at incubating enterprises. The project outcome 2 and specific measurable outputs and indicators are indicated in the graph.



1.3. Purpose and objectives of the TMC Review

In preparation of the next phase, SDC/SIDA commissioned review/evaluation on the current status and performance of TMC between end of June and mid July 2015, SDC/SIDA. The review shall further assess whether current strategies are appropriate and move into the right direction to reach profitability and sustainability of the commercially run TMCs. The evaluation along with the recommendations made will also guide SDC/SIDA in their decision about the direction of their future funding with regard to the commercial entity. The objectives of the TMC evaluation are to:

The specific objectives of the review are to:

- a) Assess how TMCs operate and whether they meet their objectives;
- b) Evaluate whether the principles of business (as discussed in the Final Evaluation Report of Phase 4 of the project) are applied in the running of TMC and make recommendations on how they may be improved;
- c) Assess the added value that TMCs make to entrepreneurship of graduates;
- d) Analysis whether the TMCs utilizes resources in an economic and effective manner;
- e) Of the TMCs visited, pick at least 2 centers and show how long the TMCs will take to become sustainable (it is expected that CMES will provide all data related to the TMCs to SDC and Sida prior to the evaluation – this will be provided to the consultant). The 2 centers chosen by the consultant will in one case show TMCs that may become self-dependent very quickly and in the other case, take longer. This exercise is to be done together with CMES staff, so that they understand the model and can apply it to all other TMCs;
- f) Analyze the prospects for TMCs to further develop and indicate the strategic direction for its future (including the current and potential sources of finance for TMCs);
- g) Recommend whether TMCs should be included in the next phase of the project and if so, the kind of support (technical/financial) is required and possible timeframe ;
- h) Design a sustainability vision for the TMCs that will allow the unit to become independent of the project, which will not require external funding.

1.4. Scope of the evaluation

The consultant would like to highlight that the brand SEY-WO-SEY, GPM and TMCs are closely interlinked with each other and influence each other's performance. SEY-WO-SEY, the overall brand notably stands for standard products, which are usually developed by GPM and the innovation/R&D unit Technology and Income Generation unit (TIG), after a detailed market assessment for the product's feasibility. TMCs execute orders commissioned by GPM. GPM purchases make a significant part (app. 30-40%) of the overall sales of TMCs. While the review focused on the key objectives as outlined above, it also took into account the role of GPM, while developing the vision of the overall commercial initiative. It needs to be further highlighted that TMCs themselves need to be financially viable but without the support of a centralized design and marketing entity, it will be more challenging to reach financial sustainability.

1.5. Evaluation Framework and methods used in evaluation

1.5.1. Information and data collection

The results are presented on the basis of the Project's Phase V indicators of outcomes 2 and the requirements outlined in the Terms of Reference (TOR), as mentioned in section 1. Time reference was the entire Project Period of Phase V (2011-2015). The report uses relevant reports and documentation and data provided by CMES but also information gathered from field visits and discussions with the CMES team. These include

- Relevance financial statements provided by TMCs and GPM
- Data on BSS students graduating and joining TMCs

1.5.2. Methodology and approach

The evaluation was conducted in a participative manner, which allowed the sounding out of all relevant stakeholders (from graduate level up to programme management, customers, local government stakeholders and parents) to ensure that the current evaluation reflects the project

realities. The consultant applied various feasible methods that could be used in such a short period of time. With CMES, there have been extensive discussions at all levels of the organization. Further, face –to face meetings and focus group discussions were held and presentations and field visits were made (see annex A5). Finally, the consultant also introduced an iterative training process to support TMC to understand the need to develop business plan and long-term vision for TMC to be sustainable and viable (see annex A6).

1.6. Reporting framework

The report follows the key objectives as outlined by the TOR as a structure. Each section starts with observations and is followed by specific recommendations. Final, more general recommendations follow as concluding remarks. The author would further like to emphasize that this reviews and recommendations are based on the observations and visits to 5 TMCs and hopes that they have some scope to draw general conclusions for the entire TMC initiative.

2. Specific Review Results

2.1. Assess, how TMCs operate and whether they meet their objectives

2.1.1. TMCs as they function today meet the objective of Phase V PRODOC

One of the mission statements of CMES related to the commercial wing is ‘to connect the disadvantaged young people with the wider market where they can profitably operate, and also to connect them with the appropriate emerging technologies to their benefit’. Following the recommendations from the evaluation made at the end of Phase IV, to split the commercial wing from the social development wing, an independent entity – TMCs - were set up near each of the 23 RTCs, with 3 independent staff (see functions in 2.2) each and a clear mandate to fulfill the following functions (see graph 1).

Graph 1:



The presentation made by CMES and observations made in 5 TMCs, re-affirm that TMCs clearly fulfill the mandate as a commercially run up skilling, production and marketing support centre. Graduates

from ABS and RTC who seek further production and some enterprise related training can opt to enroll in the TMC for up skilling. This also includes keeping accounts, saving and applying for loans. Similarly, already existing entrepreneurs, who graduated from RTC/ABS earlier and have started their enterprise, can utilize TMCs for up skilling, getting decentralized production and access to machinery and design support. The TMC acts as a marketing-business entity that represents graduates in the market and facilitates TMC based (centralized) production and ensures quality of decentralized production. Increasing local sales are complemented by increasing orders from the centralized product development and marketing entity. General Production and Marketing (GPM) promotes the brand SEY-WO-SEY at the national level and develops market relevant products. TMCs also do the costing for local orders and products and seek to be financially self-sustaining in the long run.

2.1.2. Outcome 2 indicators

The performance with regard to the Phase V Outcome 2 outputs and indicators is overall positive. As shown in Table 1 for output 2.1, more products have been developed and national accreditation achieved for 2 Agri produce Honey and Vermi compost. New wooden and metal products have been developed and enjoyed expanding sales at local and national levels. The products are considered high quality products by customers and have, due to the testing and labeling process a potential for a higher mark up than uncertified products.

Table 1: Output 2.1

Output 2.1	Achieved as per May 2015
Increasing number of products generated by CMES graduates become branded as per BSTI	TOTAL: 2 Products 1.Honey (BSTI) 2.Vermicompost (BARC) 3. Portable wooden furniture (Shewly, Shuchona, Shapla, Rachana tool and table sets)
Increased access and retention for internship of BSS graduates in TMC Target: > 50% BSS graduates become engaged in TMC	36% BSS graduates are engaged in TMC 1562 graduates out of 4318 are involved with TMC. Total 1562 M : 467 F: 1095

Similarly, as can be shown in Table 1 and Table 2, an increasing number of BSS graduates have accessed TMCs for further up skilling, enterprise development and marketing support. Though the target of 50% of graduates was not achieved, it is a remarkable 36% of BSS graduates, who regularly make use TMCs as a support unit. We do not have detailed TMC enrolment by trade and gender, which is important. Data should always be collected disaggregated. While female graduates have significantly more made use of the TMCs, it is also an increasing number of male graduates who over time have joined TMCs. Earlier reports (Midterm Review) highlighted that young men opt for wage employment, while women tend to remain in the 'protected' CMES environment and would prefer to remain closer to home and work as self-employed home based women workers. There were also references in the report that probably, women would see their economic activity as a 'secondary activity to the main bread earner'.⁴ CMES explains the dip from the 3rd year to the 4th year, that it takes a few months for BSS graduates to get actively involved in TMCs. They expect a significant increase during the second half of the year. Further, Hartals between January-April might have had an impact on the enrolment.

⁴ See Midterm Review 2014

Table 2: No of graduates as per status of employment and average monthly income

Subject	Some achievements				
	1 st year June'11 – May'12	2 nd year June'12 – May'13	3 rd year June'13– May '14	4 th year June'14– May '15	Total
Self-employed/ enterprise	251 (M: 70, F: 181)	349 (M: 120, F: 229)	571 (M: 161, F: 410)	391 (M: 116, F: 275)	1,562 (M: 467, F: 1,095)
Job in CMES & other organizations	145 (M: 62, F: 83)	288 (M: 173, F: 115)	597 (M: 318, F: 279)	529 (M: 297, F: 232)	1,559 (M: 850, F: 709)
TOTAL	758	929	1173	1458	4318
Monthly average income (average)	BDT 4,200	BDT 4,200	BDT 4,521	BDT 4,863	

Since there are no disaggregated data (trade or gender), it is difficult to monitor and assess what income impact TMCs have on graduates who opt for entrepreneurship. Overall, the project document projects an average monthly income of BDT 5000-5500, which is an equivalent to the only existing minimum wage in the urban industrial readymade garment industry.⁵ The consultant cross checked selected accounts kept by graduates and noticed that average incomes seem between BDT 3500, reaching up to BDT 25'000 or 30'000 per month. This seems very high, given the fact that these enterprises are located in rural areas and market rates in urban, much more dynamic areas are much lower. From the field visits and the studying of the order books, there are indications that TMCs pay higher rates than the market rates, which could be the reason for this unexpectedly high income.

Suggestions/Recommendations

- While TMCs fulfill their role as marketing, up skilling and service providers to graduate entrepreneurs; these services are still quite basic and need to be further expanded, upgraded and professionalized.
- All data of graduates need to be carefully collected and disaggregated by sex and trade. Aggregated data do not provide required information. Categories might be defined as follows:
 - Starting enterprise independently: micro enterprise
 - Starting enterprise, but joining TMC for up skilling and business incubation
 - Getting a job
 - Else (not finding work, back to school, getting married, migrating etc.)
- Disaggregate average income by sex and trade. It is important to monitor whether women equally benefit from the TMC support or even more.
- Data need not only to be collected but also validated and checked for quality.
- Systematically collect information on who requires which services from TMCs.
- Undertake detailed study on entrepreneurs, their performance, expansion, sales and dynamics. This is relevant information to assess, what services TMCs should provide to graduate entrepreneurs

⁵ Till 2013, there was not minimum wage in Bangladesh. After the incidence of Rama Plaza, intense negotiations between industry Associations, Trade Unions and Government led to the conclusion that Minimum Wages in the Readymade Garment Industry are 5300 BDT/month.

2.2. Are principles of business applied in the running of TMCs?

CMES has during the last years made steady efforts towards developing more business acumen within the organization and amongst the staff who has taken on the role of running TMCs and the centralized GPM. Discussions, observations and existing data indicate that the organization has taken the step towards more market focus. There are indications that CMES operates more 'business like', however, there is need for further strengthening of the capacities in this area. The consultant would like to mention at this point that the current income and expenditure data have challenges, and need to be carefully reviewed. There are issues with consistency and validity of data, which need to be looked at on a priority basis. The consultant made the assessment based on the data provided. In brief, the following observations can be made, which provide indications that CMES has taken steps towards a more business like organization:

2.2.1. Sales and marketing

Sales have continuously increased since the inception of TMCs at both levels, the TMC level as well as the GPM level, which indicates slow growth and market expansion. Important to mention in this context is that most of the sales between 2011-2014 have been made locally, which only indicates that TMCs have been able to tap local markets and sales in an effective manner (see table 3). In the case of TMCs, it shows that particularly in year 3 / 4, sales have increased. In the case of GPM, we are getting a bit of a startling figure, which requires further clarification. After an initial 66% sales increase between year 1 and 2, the sales remained more or less constant. This only indicates that GPM has either not been able to expand marketing efforts and sales, or that local sales have been more pro-actively promoted. Since there is no business plan or marketing strategy in place, it is difficult to make conclusions in this area.

Table 3: Sales made by TMCs and GPM between 2011-2014, BDT

	y1 (2011), ,	y2 (2012)	y3 (2013)	y4 (2014)
Income TMCs	17,160,230	18,393,677	19,456,689	23,962,054
% Growth		7%	6%	23%
Income GPM	964,963	1,604,922	1,625,905	1,641,685
% Growth		66%	1%	1%

Source: CMES 2015

TMCs are setting monthly targets for sales and production, which are monitored. It is unclear though how these targets are usually set. They are not related to the continuously increasing production capacities, which are being built by training graduates in production skills and as entrepreneurs.

Observation: Significant progress has been made to separate TMCs from the social development initiative. However, a business plan is required with clear marketing/sales strategies to ensure further expansion. Data must be carefully collected, validated and reviewed on a regular basis against targets in sales and expenditure. A business plan might also include need for further investments, working capital and capacity building so that operations can be further expanded and move towards financial sustainability. Most importantly, GPM and SEY-WO-SEY need to ensure cash flow and liquidity. Many of the products are sold on consignment and credit, which puts a pressure on CMES's liquidity. TMCs and GPM need to focus on advance payments and payment against delivery to remain in the business.

2.2.2. Client base

CMES has been able to develop a regular customer base at TMC local and GPM national level. Efforts have been streamlined at the TMC level when it comes to sales. TMC and RTC staff regularly visits retailers, shops and wholesalers and participate in relevant fairs. All TMCs visited keep track of their clients and regularly follow up by visiting or calling clients. With their limited resources, CMES has further developed regular sales and marketing opportunities by reaching out to potential customers through local fairs and local community based networks developed during the BSS programme (e.g. parents, community working groups etc.)

Observation: There is an increasing demand for SEY-WO-SEY products and services. In the case of vermi compost and carpentry products, the demand seems significantly higher than what TMCs currently can supply and capacities can be further expanded so that these requirements can be met. Though there is a regular clientele, it needs to be highlighted that most of the clients are end customers and small shop owners. For the future, it is important for TMCs and GPM to develop a systematic approach for market assessments, develop sales channels more systematically, appoint distributors and sell in larger quantities to retailers to be able to further grow and systematically expand markets with broader outreach and more regularity.

2.2.3 Product Development and Branding

As indicated in the project outcomes above, GPM, TIG and TMCs have continuously developed new products and tests them in the market. Efforts of building a brand are made, albeit on small scale. Products developed by GPM carry product labels and packaging usually carries a description of the product and the organization. To distinguish existing, particularly agri business related products from lower quality products, CMES has introduced TMC audits to test quality and consistency of products such as honey and vermi composting, to comply with the BSTI requirements.

Observation: Branding and product development efforts are in place but need to be intensified at various levels so that SEY-WO-SEY becomes the national and visible brand it wants to be.

2.2.4 Costing and Margins and Pricing of products

CMES has over the years developed a systematic way how to cost products and services provided by GPM and TMC. Calculation of margins is usually based on market assessments and added to the overall production costs of various products offered. Staff in TMCs seems to be well trained in using the existing formula for costing. Discussions reveal that this formula was given by a consultant who worked with them and who has experience in the market. Since then, this formula is applied across products. On an average, staff adds 20% to the overall costs as a margin to the product at TMC level. Approximately 15% margin is added at the GPM level. By adding these margins, it is expected that through and expansion of sales, these margins will be able to cover expenditure of TMCs and GPM. The margins taken seem too low and they do not take into account that TMCs and GPMs do not operate on high volume orders. In such cases margins of this level will work.

Observation: It was however observed that there is little awareness about all the costs involved when costing of products takes place. It was noticed that while the units included material, transport and packaging costs, they did not include their overheads and staff expenditure for overseeing, coordinating and facilitating and finishing production into the costing. Product costs therefore are sold at too low a value. This is understandable, since for many years, when

functioning as an NGO, staff costs were a part of the development plan. Many NGOs make this mistake and land up selling their products too cheap.

Similarly, there seems to be an understanding that market entry should be made at low cost to position in the market and it is hoped that after the product proves value, prices can be increased. This understanding seems problematic and needs to be changed.

Additionally, it was observed that it is still challenging to negotiate hard with other business partners and within the market. The awareness of optimizing margins for each of the channels has not as yet developed.

Margins as they are calculated now, 20% for TMCs and 15% for GPM, seem low. It has to taken into account that certain sales channels will require more than 20% or 15% respectively, which leaves SEY-WO-SEY without any margins to operate the business.

2.2.5 Generating incomes and measuring expenditure

Similar to the costing of products, it was noticed that the overall calculations of income-expenditure, which provides an important indication on whether TMCs and GPM are making profit or are in a loss, have not taken into account the effective costs and expenditure occurred during the project period. Similarly RTC staff support needs to be taken into account (20% Unit Organiser, 20% accounts, 20-30% Assistant Teacher/ Senior Teacher). This is understandable, given that the project has funded operational costs and expenditures of both RTC and TMCs. It is also understandable that resources are shared to save expenses and resources. Earlier income-expenditure statements however could have led to wrong conclusions that overall TMCs and GPMs are moving towards financial viability, which is doubtful if one takes into consideration the costs which were not accounted for, since funding had been provided.

The consultant therefore, re-visited the income-expenditure statements and costing of products in 3 TMCs and suggested a different format (see table 4 and 4a) which makes it easy to calculate income-expenditure statements and take into account the funding received to ensure that cash flow and investment requirements are met.

Table 4: Revised Income – Expenditure statements

1. Sales/Income			
	Sales local		
	Sales national		
	Service Charges		
	Sales Subtotal		
2. Expense			
2.1 Production/Outsourcing (Includes materials etc.)			
	Raw Materials		
	Wages/Outsourcing/Contracting charges		
	Finishing/Packaging		
	Development costs		
	Subtotal		
2.2 Operational Expenditure			
	Marketing/Sales/Branding		
	Salaries inclusive up skilling**		
	Transport		
	Depreciation, Maintenance		
	Overheads		
	Training Materials		
	Subtotal		
	Expenses Subtotal		
Income-Expenditure: Profit / Loss			
Donor funding SDC and SIDA			
Income-Expenditure: Profit / Loss incl. funding			

**Salaries:
OT, AT, CTNG
+ 20% RTC UO
+ 20% Accounts
+ 20-30% AT

* Overheads
*Rent
*Supervisory costs
*Support RTC
*Telephone
*Consumables

Table 4a: Income Expenditure corrected for all TMCs

	Y1 (2011)	Y2 (2012)	Y3 (2013)	Y4 (2014)
Income-Expenditure	(2,982,974)	(10,875,570)	(13,352,612)	(15,578,730)
Donor funding SDC and SIDA	7,528,386	14,248,198	13,668,093	15,757,736
Income-Expenditure: Profit/loss plus funding fill up	4,545,412	3,372,628	315,481	179,006

Source: CMES 2015: for details, see Annexure A5

Observation: There is a need to change the perspective of costing and that services provided to graduates should be seen as a potential source of income to TMCs. While there is an understanding that costs have to be covered, there is a need to better understand that TMCs need to function as commercial entities, which 'sell' services and products at competitive rates, which in the long run might not be subsidized. The vision statement for 2020 in the project document clearly reflects this view (p. 30). Further, TMC teams need to start to be more entrepreneurial and independent in their thinking and be more driven by them to run autonomous units. Currently, TMCs are still driven by the Service Centre and clearly instructed on how they should operate.

Suggestions/Recommendations:

- Business plan: marketing strategy, sales projections and projections of capital and investments needed, keeping in mind the increased number of enterprises.
- Systematically assess market trends at local and national level
- Develop solid sales channels and partnerships based on marketing and sales strategy.
- Revise costing of products and margins: optimize margins for sales channels.
- Revise income-expenditure statements. SDC/SIDA Funding needs to be shown separately in profit-loss statement: Develop financial intelligence in TMCs.
- Change view that TMCs should enter with low rates and raise price when product is successful. Charge services provided to graduates (design, product development, machine use, training).
- Keep cash flow healthy: Minimize credit and consignment terms and try to sell against advance payment and delivery
- Build local capacities within TMCs to take decisions more independently

2.3. Assess Value add TMCs make to entrepreneurship of graduates

Several focus group discussions with graduates currently getting up skilling support in TMCs and with graduate entrepreneurs who have since become independent entrepreneurs, indicate that overall, BSS and TMCs prepare the graduates well for starting their independent enterprise (see Box 1).

Though these are only fragmented impressions, which are based on approximately 10 focus group discussions with app. over 100 graduates, there seems to be a pattern where enterprises develop the skills to expand and grow their businesses sustainably.

There is a clear value add of TMCs to the graduates. While initially, graduates use TMCs for incubation and production support, more mature graduates noted that they regularly use the centre for specific services, for design support, some up-skilling or for use of quality machines they do not have in their units. Currently, the graduates do not contribute to the TMCs in any way, but they indicated that they would be ready to pay a service fee for such support.

Observation: Such data so far have not as yet been collected, which is critical to assess the specific needs required by graduates, which TMCs could offer.

Box 1: Interesting observations

- Several entrepreneurs generate between 50%-100% sales themselves. They use TMC only for specific upgrading services and machinery.
- Some graduates met have expanded their business and hired 1-2 people (some more).
- Some met have re-invested and expanded investments.
- Some are supported by families who even invested into their son's/daughter's business (1 case upto 1 lakh)
- Garment entrepreneurs start from home, some expand to enterprise with several employees in a shop in town.
- Some garment entrepreneurs have training 'business'
- BSS programme prepares graduates well to do business.

Suggestions/Recommendations:

- Undertake detailed study on entrepreneurs, their performance, expansion, sales and dynamics. This is relevant information to assess, what services TMCs should provide to graduate entrepreneurs.
- In the survey, also add questions relevant how much graduates would be ready to pay for these services.
- Set up real-time database to track/monitor entrepreneurs disaggregated by Trades and type of enterprise:
 - Starting enterprise independently: micro enterprise, only using services from TMCs
 - Starting enterprise, but joining TMC for up skilling and business incubation
 - Starting enterprise, operates independently: getting production and using services from TMCs

2.4. Effectiveness of resource utilization

There is no doubt that the equipment and funding support for operational costs provided by the donor have been used effectively in the TMC units. It is important to emphasize that the investments made into the TMCs were very basic. The units as they are set up now, are simple and small and sparsely equipped, with very limited machinery and tools, which are required to produce high quality products. The TMC staff, OTs and TAs feel that limited equipment and not enough space constrains them to maintain the quality that is required from the market. They simply do not have the tools and equipment to assure the quality, this is particularly relevant at the national level, when they produce for GPM and Dhaka based quality markets.

With these given limited resources, and based on the observations made in the 5 TMCs, TMCs are visited well and all machines seem to get used regularly. There is also a strong focus on saving expenditure. TMC teams are trying to save on materials and minimize expenditure and wastage and proudly communicate their low levels of wastage to be 1-2%. There is however no documentation which systematically establishes.

Observation: limited resources and focus on effective utilization of resources are typical realities of any start up enterprise. It is however critical to ensure that good quality equipment and tools are available in TMCs, which can ensure that TMC functions are competently fulfilled. Developing quality products requires zero tolerance on quality and finishing and facilities, which are well lit, spacious and which have good packaging and storage facilities. While material wastage seems low, it is quite difficult to believe that such wastage is below industry standards (which are considered as very good at 3%); there is need for documentation for each trade. Further, the quality assurance process for production (see next section) seems resource heavy and takes a lot of time of TMC staff like OT, TA, but also RTC staff (senior teacher, OT and AT).

Suggestions/Recommendations:

- It is important not to 'starve' TMCs on investments and operational expenditure but to equip the TMCs with good machineries and tools and infrastructure that they can fulfill their role of facilitation centres.
- As a part of a business plan, expand investments and upgrade TMCs to be service facilitation centre
- Carefully start documenting wastage of materials, disaggregated by product/trade
- To reduce 'resource heavy' monitoring and quality assurance, strengthen quality related documentation and self-control amongst entrepreneurs (see next section).

2.5. Assess TMC performance overall and of 2 selected TMCs

Assessing the sustainability of TMCs is a challenging task, particularly in a situation, where a social development organization transitions into a commercial undertaking. TMCs are new, and many have operated since 2 years in full capacities. With existing limited equipment and resources, it is doubtful that operations can be significantly expanded. As mentioned earlier, there is need for additional investments and capacity development in TMCs and GPM. To assess, how long it takes for TMCs to be sustainable requires a business plan and clear strategy, where TMCs want to go, and sound financial data, based on which performance of TMCs can be assessed. While these areas need to be further developed, during the next phase, it is however possible to make a broad assessment, based on indications and observations made, which clearly show, that TMCs move towards becoming sustainable enterprises.

As mentioned, sustainability of TMCs also depends on the growth of the CMES programme and the direction it wants to take. Financial sustainability of TMCs should be linked to the expansion of CMES's entrepreneurship initiative. How many graduates join TMCs as self-employed graduates each year and want to start their enterprises? CMES has yet to decide the mode how it wants to remain engaged with enterprises, which have achieved a certain level of independence into their economic/production and sales related activities. As a marketing and service provider, it is important to see the volume of sales, that is required if the majority of graduates remain partners of TMCs in production. This surely affects the scale and scope of TMCs and GPM, how fast they need to grow. The strategy for this has to be further elaborated (probably during the next phase) as a part of the development of the business plan for TMCs and GPM. 2 scenarios will be presented. These questions will be further elaborated in section 2.5.5. While no conclusion can be made, by when sustainability of TMCs will be achieved, I would like to address sustainability at 4 levels, since all these aspects are critical to run a commercial unit well: a) role clarity, b) processes and documentation in place, c) quality system in place and d) sales and production are expanding (see Section 2). The consultant's suggestion how to reach break even and sustainability are elaborated in section 3 and 5.

2.5.1. Role Clarity

CMES, during the project Phase V period has, as a part of the re-organization, defined roles and demarcated responsibilities between the various entities involved. GPM has the role of a product development, branding, marketing and sales unit, while TMCs act as facilitation centre, which provides services for marketing, design support, up skilling and business incubation. Enterprises too are aware of the services they can get and which compliances they have to fulfill if they collaborate with TMCs.

Each TMC has an organigram comprising of 3 main staff, the OT, TA and Caretaker cum Night Guard (CTNG). They make a typical team of a TMC (see Graph 2). The TMCs are further supported for monitoring,

Graph 2: Organigram of TMC



Source: CMES 2015

accounts and technical support by RTC staff (UO, Accounts, 20-AT) who spend approximately 20% of their time in supporting, monitoring TMCs and most importantly for up-skilling and assurance of quality.⁶

Observation: TMCs have a dedicated small team, which is strongly supported by RTC management, accounting and technical staff in key areas of TMCs. This is not a problem but has to be clearly reported and costed in, when expenses are taken into account. Sharing resources makes absolute sense, since TMCs will not be able to afford fulltime monitoring/accounts and technical support. Additional support from the Service Centre includes monitoring of overall TMC performance and audits for particular products, such as Lab testing of vermi compost, which needs to be included as expense too. It would help to have an overall documentation, which clearly highlights roles and responsibilities of each unit.

2.5.2. Processes and Documentation defined and in place

CMES has over the years developed a well-defined process and documentation system to assure transparency and control from order to dispatch of products. Based on the observations made, the consultants can safely confirm that the staff is well aware about TMC operational guidelines and the documentation requirements and developed the capacities to adequately document in-out flow of products at various levels - GPM, TMC and enterprise level. It is worth highlighting that TMCs emphasize the need for contractual arrangements between TMCs and subcontracting enterprises and further encourage contractual arrangements if these enterprises hire workers.

Box 2: In brief the following documents are in place:

- Monthly sales/expenditure statements and aggregated at service centre level (need revision as per format highlighted in section 2.2.5)
- Sales/purchase orders and production related documentation are well defined and followed by all the units visited.
- Contractual arrangements with self-employed on rates and deliveries for each order are in place
- Contractual arrangements of entrepreneurs employing people are put in place
- Graduates keep own accounts and monitor own business

Observation: CMES has developed a complex process and documentation system as per industry standards, which supports TMCs and GPM to efficiently handle orders. There is a need to develop an overview of the process, where at each stage of any order, documentation required and responsibilities are mentioned. This ensures that with increased volumes, documentation is aligned and staff is clear on procedures, while executing orders. Further, as will be discussed in the quality section, samples have not been adequately documented, which results in the intensified quality checking efforts made by TMC and RTC staff to ensure quality.

2.5.3. Quality System in place

There are quality systems in place at various levels, so that products reach the required quality for higher end markets as envisaged by CMES and TMCs. Main quality assurance takes place at TMC level, where UO, AT, OT and ST form a quality assurance team, which checks quality and monitors decentralized and centralized production. Products are usually rated as A-B-C levels and sold in the markets accordingly. At the national level, GPM does a second quality check up before products are sold. The quality is usually rated as 'quite good' and satisfactory. However, TMC staff and GPM staff face significant challenges to get consistent quality from all TMCs and from the enterprises, which produce outside TMC premises (decentralized). As

⁶ The real percentage needs to be assessed. We took the indications provided by CMES. 20% seems a safe percentage.

mentioned earlier, the current quality assurance is resource heavy and requires the commitment and presence of senior TMC and RTC personnel. Consequently, TMCs prefer centralized production, which is not sustainable if sales increase. In such a scenario, quality assurance of will be challenging, since it requires resources, which are already limited.

Observation: samples are not signed by the clients for reference; there is need for more detailed documentation on quality criteria for samples and production. Such documentation should be developed, since it not only protects producers from arbitrary business practices but also guides producers to follow quality standards as per requirements. Graduates are not systematically trained to follow quality processes and do not need to get samples approved and documented. Further, wastage is not systematically monitored and documented. With the absence of strong quality documentation, products are passed based on personal judgment at both TMC and GPM levels, which requires senior staff to take decisions.

2.5.4. Business: Sales and production are expanding (also see Section 2)

As already mentioned sales have continuously increased, which indicates TMCs to be more actively engaged in business and commercial activities. This of course also brings larger expenditure, particularly in a phase, where business activity is still expanding and systems are still being developed and set up. It is therefore not surprising that income-expenditure statements are not reaching positive figures.

2.5.5. Networking and Community ownership for TMCs

The establishment of networks, with customers and the community has been highlighted in the project document as a priority. Strong business networks with business associations, enterprises and chambers at local levels not only increases possible sales volumes and the development of markets, but also visibility of the brand and ensures local anchoring of the business initiative of CMES. As mentioned, each of the TMCs and GPM have established a client base and have intensified networking activities. It is however to build institutional partnerships with national and local associations, become members of trade specific associations and chambers and international associations (e.g. fair trade) to take advantage of services they provide for promotions and business expansion.

Engagement with the community and local government seems to be close and local leaders are not only aware of BSS but also of TMCs and proactively promote products. However, it will be crucial to start discussing the purpose of TMCs as a social business so that communities realize that they should strengthen TMC, through cash and in kind contributions. For sustainability, one might also explore co-ownership or co-financing, where local community, government and individuals contribute to the running and upgrading of TMCs.

2.5.6. Occupational Safety and quality of employment

CMES, as a part of the BSS training and TMC up-skilling process, provides exposure and training on workplace safety, at least at a basic level. Trainees in many cases follow the required workplace safety measures. One however, observed variations between the TMCs and training centres. It is surely suggested that workplace safety continuous to be a priority of the training process.

Regarding quality of work, it is heartening to see that entrepreneurs, as they get into a contractual arrangement with TMCs, also issue contracts with people they employ. These contracts are either order based or are valid for a specific period of time. They include terms, delivery, compliance issues and rates. Such contracts are surely contributing to a transparent

and amicable working relationship between the micro entrepreneur and the worker. This practice should be further encouraged.

2.5.7. Additional observations for 2 TMCs to become sustainable

The two TMCs, Deuty and Damkura have been selected to assess more in detail their current status, by when they can become sustainable. As mentioned, all the units have done well by splitting the commercial wing from the development section, building a team, setting up processes and documentation and increasingly accessing markets, particularly local markets for sales and production. They define sales and production targets and have a close collaboration with their producers (decentralized & centralized).

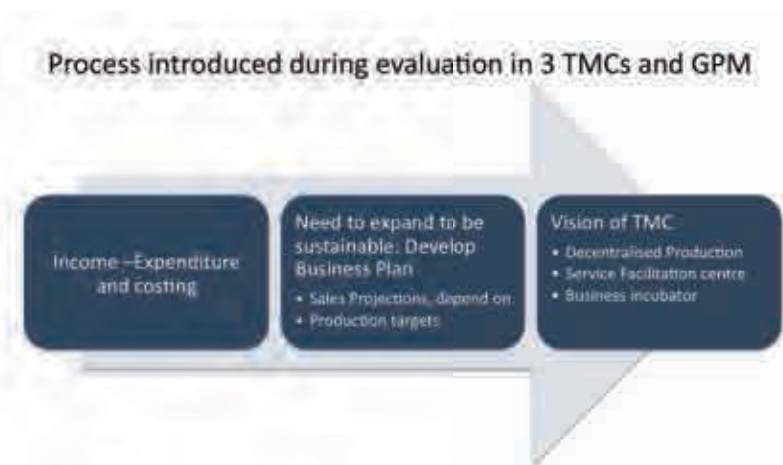
It will be important to focus on the development of a business plan for individual TMCs, which guides TMCs in how to take on the role of a service facilitation centre, which markets – develops design and products - supports skills development and business incubation and coordinates production.

Box 3: Specific Observations in Deuty-Damkura

- Motivated team with vision to make TMC sustainable
- Clear focus on graduates' empowerment
- Income-expenditure statements in place, need revision
- Sales targets, margins included, however not linked to continuous expansion of graduates
- Close collaboration in local markets, client base
- Strong documentation and commitment to quality
- Contractual arrangements with TMC graduates
- Many self-employed generate >50% of their income by themselves (needs study)
- Preference for centralised production in TMC facilities
- Graduates maintain accounts to monitor their business.

Against this background, the consultant held a 3 hour long participatory session in 3 TMCs (Damkura, Deuty, Dinajpur), and held discussions on market based income and expenditure statements and the need for expansion of production capacities to ensure sustainability and financial viability of TMCs (see graph 3 below and annex A6 for details).

Graph 3: Process



This process made it possible to assess the existing TMC capacities for running TMCs as a viable and sustainable unit in the mid and long run.

After reviewing the income-expenditure statements of both units, it can be concluded that sales have consistently increased (see table 5, see Annexure A6). Income-expenditure statements also indicate that the current sales volume is not as yet able to absorb the costs for running the TMCs. It is

expected, as earlier mentioned, that the 15-20% margin should be able to cover existing expenditures within TMCs in the long run. This would give us the required idea, by when TMCs are financially sustainable. The financial support from SDC/SIDA to cover expenditure

therefore, fills the current gap and TMCs need to significantly expand sales to be able to cover these operational expenditures, as it is visible in table 5.

Table 5: Sales and expenditure statement for 2014 for Deuty and Damkura

Unit	Sales 2014 BDT	Expenditure 2014 BDT	Income/ Expenditure without SDC/SIDA funding 2014	Income/Expenditure incl. SDC/SIDA funding
Damkura	2,571,304	3,430,794	(859,490)	297,637
Deuty	1,243,689	2,321,078	(1,077,389)	463,652

Source: CMES 2015, for details, see Annexure A7

As shown in the graph below, TMC sales have to further increase to reach financial sustainability. Sales targets need to be linked to production targets. This requires a clear vision of CMES how the TMCs should function and support TMC graduates and their enterprises with orders and production opportunities. Till date, targets have been set without taking into account the number of graduates willing to access these income-generating opportunities. **After intense discussions, it seems that CMES would prefer that over a period of maximum 4 years, graduates would not require further marketing support from TMCs. For the next phase and as a part of the development of Business plans for TMCs and GPM, such a vision and understanding should be further sharpened.**

From the discussions, 2 scenarios emerged, which will have different implications how much TMCs and GPM operations will have to grow. The scenario was developed with indicative data and not with real numbers, since CMES has till date not grouped their graduates into the categories suggested for the development scenarios. The project proposal suggests that SEY-WO-SEY has the long-term vision to generate employment to 75% of the trained graduates,⁷ which seems very high and ambitious and also not really required, since many of the graduate entrepreneurs, after an initial phase of support, can generate their own sales. This at least was repeatedly emphasized by CMES staff in various TMCs. To not overburden TMCs and GPM's sales activities, therefore, the 2 scenarios are much less ambitious.

Scenario 1 has the following development model as a basis: Graduates join TMC for 1 year up skilling and business incubation and get prepared to run their own enterprise, after 1 year more or less independently. They still depend on orders from TMC though. The assumption made here is that during year 1, within TMC, enterprises would produce 50%, while in year 2, they are able to generate more orders for themselves and need less TMC support (30%), since they increasingly generate their income from local markets. In year 3, enterprises would receive approximately 10-20% orders, while from year 4 onwards they would remain independent. They might already start paying for specific services they ask from TMCs. Enterprises in year 4 would use only services from TMCs, which are fee based and confined to machine use, access



⁷ Project document, Phase V, p. 30

to design support and up skilling.

Scenario 2 follows a similar process, however keeps in touch with enterprises with a 10% provision of orders for enterprises even after year 4. Keeping these scenarios in mind, and assuming that 'labour/subcontracting' costs would be around 20% off the overall value of the sales product at TMC level (100%), the following projections for TMCs would be envisaged.

Table 6: Scenarios for TMC expansion (indicative numbers, needs real data)

Scenario 1: TMCs keep no of enterprises constant for outsourcing					Scenario 2: TMCs expands number of enterprises for outsourcing				
No graduates	y1	y2	y3	y4	No graduates	y1	y2	y3	y4
Group 1: in TMC	15	15	15	15	Group 1: in TMC	15	15	15	15
Group 2:	10	10	10	10	Group 2:	10	10	10	10
Group 3	10	10	10	10	Group 3	10	10	10	10
Group 4	10	10	10	10	Group 4	10	20	30	40
TOTAL Graduates	45	45	45	45	TOTAL Graduates	45	55	75	75

Table7: Scenarios for TMC expansion and sales

Scenario 1: TMCs keep no of enterprises constant for outsourcing					Scenario 2: TMCs expands number of enterprises for outsourcing				
Sales BDT projection based on %/year/group	y1	y2	y3	y4	Sales BDT projection based on %/year/group	y1	y2	y3	y4
Group 1, TMC	2,250,000	2,250,000	2,250,000	2,250,000	Group 1, TMC	2,250,000	2,250,000	2,250,000	2,250,000
Group 2	900,000	900,000	900,000	900,000	Group 2	900,000	900,000	900,000	900,000
Group 3	600,000	600,000	600,000	600,000	Group 3	600,000	600,000	600,000	600,000
Group 4	-	-	-	-	Group 4	300,000	600,000	900,000	1,200,000
TOTAL Sales requ.	3,750,000	3,750,000	3,750,000	3,750,000	TOTAL Sales requ.	4,050,000	4,350,000	4,650,000	4,950,000

Juxtaposing these projected figures against the actual sales made during 2014 in either unit, Damkura or Deuty, these figures are significantly higher (more than double), which only indicates that TMCs have to significantly increase their sales until they are financially sustainable. Further, in order to expand sales, we will also expect higher expenditure (see annexure A7).

We can safely say that from the point onwards, when TMCs are able to cover their expenditure with the 15-20% margins, they can reach the first milestone towards sustainability. The second milestone will be achieved at the point when TMCs are able to re-invest into their machineries and equipment. Both these milestones have not as yet been achieved. With a sound business plan and further investments made it seems however feasible that by the end of the next phase VI, operational expenditure can be covered, no more external funding will be required.

Suggestions/Recommendations:

Role Clarity:

- Develop organigram for entire SEY-W0-SEY and highlight various support services from CMES.
- Ensure that CMES services are taken into expenditure. Assess their contribution systematically.

Process and Documentation:

- Flow- chart: document overview for process flow and related responsibilities
- Samples documentation, which is communicated to the enterprises

Quality Assurance:

- Strengthen quality assurance process
- Approve sample for each outsourced enterprise
- Document quality process, based on which TMC and GPM 'passes' and 'rejects' products
- Train graduates on quality criteria
- Assess and document wastage

Sustainability of 2 TMCs

- Develop strategy for TMC expansion where business plan takes into account no of graduates using TMC services
- Develop expansion plan, upgrading and investment requirements
- Explore service fee based income paid by graduate entrepreneurs
- Reach first milestone, where operational costs are covered and funding is not required (end of Phase VI)

3. Assess prospects of TMCs and indicate strategic directions for its future

Based on the earlier details about the good progress made during the last project period in developing TMCs into commercial entities, and the 2 scenarios presented for Deuty and Damkura, TMCs and GPMs have the potential to become financially viable and can sustain operations. The way TMCs and GPM are set up and engage with enterprises is well defined and as mentioned earlier, it is now important for the organization to decide, how long TMCs would want to engage with graduates / enterprises when it

comes to marketing support. This defines the size and complexity of TMC and GPM. During discussions, the staff also started understanding that centralized production will not be an option, given the limited space and facilities available. Decentralized production will be the focus and systems need to be strengthened and put in place to ensure efficient production and quality systems (see graph 5). Staff also realized that a shift has to take place where TMC as a service provider takes on a role of a facilitator, coordinator and incubator. For these services, TMCs, in order to be financially viable, also need to start charging their 'graduate customers' for the services provided. Fees might be charged for up skilling training, business development support, R&D, design and machine use or finishing / packaging support. Such an approach also ensures that TMCs provide the required quality services so that graduates see a value add when they use and visit the TMCs.

Initial discussions on future vision were held in 3 TMCs and the GPM in the service centre of CMES. CMES needs to take these discussions forward and integrate the vision building into the business plan. Capacity building at local TMC level is critical and provisions should be made to grant more autonomy the TMCs to run their unit independently.

Graph 5: Sustainability vision for SEY-WO-SEY and TMC



4. Recommend, whether TMCs should be included in the next phase

It is strongly recommended that TMCs and GPM get further funding for at least 3-4 years to reach the first milestone, namely covering operational expenditure and move towards being sustainable in the long run. Both GPM and TMCs need to expand, diversify and further professionalize their operations. This is but natural and could not have been done during Phase V. Given the highly decentralized structure of how TMCs function, namely in a local, mostly rural and backward economic environment, incubating a social enterprise (TMCs) takes time. It is markets as well as available human resources, which need to be further developed, groomed and sustained; this does not happen over night. For TMCs and GPM to be vibrant carriers of the SEY-WO-SEY brand, which provide not only access to markets, but also professional quality services and machinery to the graduates as service centres, it requires further expansion of marketing and production infrastructure at GPM and TMC level. Detailed discussions with CMES and TC and GPM staff highlighted current bottlenecks and challenges, which should be taken into account during the next phase. The assessment of funding requirements for at least another 3-4 years can only be done if business plans are made and if CMES is clear about how long TMCs should provide marketing services to graduates. It is expected that GPM requires significantly more investments than in Phase V. Some key areas were highlighted during discussions, which might be taken into account when business plans are developed (see table 8).

Table 8: Selected areas for grant support to expand GPM and TMC capacities for Phase VI

Financing Requirements GPM	Financing Requirements TMCs
Investments	Investments
Marketing / Branding	Equipment/Machinery
R&D, product development and documentation	Upgrading facility
Display opportunities for visibility of products (showroom, facility for B2B meetings)	Materials
Certifications: e.g. fair trade etc.	Storage facility
Storage facilities	Finishing/packaging room
Secondary packaging facilities	Computer?
Transport facility	Some inventory, packaging materials
Cash reserves/Working capital (for liquidity)	Marketing expenditure
	Operational expenditure
Operational Expenditure	
Upgrading and Capacity building	Upgrading and Capacity building
Upgrading/training (business plan and mentoring)	Upgrading/training (business plan and mentoring)
Technical Upgrading	Technical Upgrading

5. Sustainability vision for TMCs to be independent from external funding

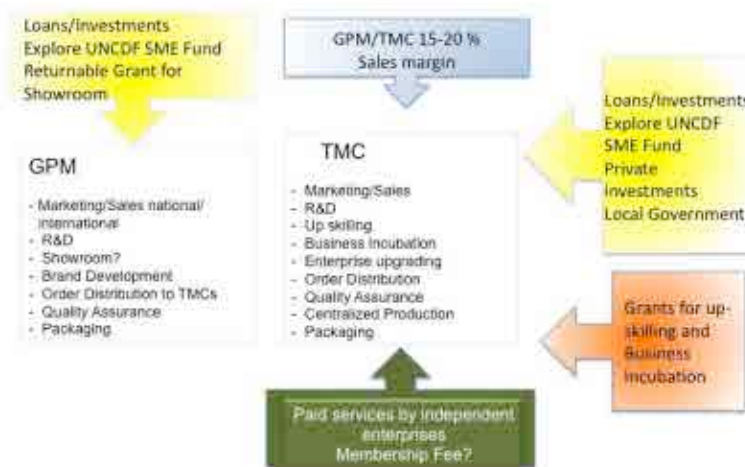
Even though TMCs and GPM are operating as independent entities, their whole purpose remains that they serve, till date, only CMES graduates who are also their main beneficiaries. Over time, TMC also has started offering some paid short courses to the members of the adolescent girls programme (AGP). Services to non-graduates and paid courses can be additional income sources for TMCs. Therefore, these units will co-exist with CMES and their graduate enterprises and should increasingly open up for other enterprises. Current social enterprises usually take advantage of various sources of funding, since they operate as hybrid business models, which combine profit with social impact. It is suggested, that a similar approach is followed, where grants, loans and investments as possible funding sources can be

explored. It is to be highlighted that for the common phase VI further grants are required so that TMCs and GPMs come to a stage where they can break even and can raise additional funds to sustain their enterprises. Further, the consultants like to highlight that for up skilling and business incubation of fresh graduates coming from BSS, grant based funding will always be required. The options for funding for long-term independence from funding are visualized in graph 6 below.

Long term Financing options for TMCs:

- Grants for up skilling and incubation training for graduates during year 1.
- Co-investments: Local Community/businesses: land, infrastructure, building, equipment, showroom facilities in towns etc.
- Service based fees/membership fees: graduate entrepreneurs
- 15-20% sales margin
- Loan/Grant: SME fund which is being set up by UNCDF for expansion of TMCs

Graph 6: Financing SEY-WO-SEY, TMC/GPM for sustainability: Options



Long term Financing of GPM

- Loans: possible returnable grant (low/zero-interest) from donors
- Investments: Social ventures provide patient capital to social enterprises.
- Split Showroom from other entity and seek independent financing for showroom as profit centre (e.g. returnable grant).

6. Final Recommendations

CMES, by establishing all 23 TMCs and GPM as independent entities and building capacities of teams, has successfully started developing business like entities. It seems evident from the findings however, that another round of funding is required so that these efforts can be expanded, institutionalized and further strengthened. It will be crucial, at this stage that CMES consolidates the vision and further strategizes expansion plans of BSS and aligns these with the sales projections for TMCs and GPMs. CMES and TMCs also need to take into account that every year, a fixed number of graduates leaves BSS and wants to join TMCs. Therefore, any production and sales target should be linked to this expansion. Only then, the objective of the SEY-WO-SEY brand can be achieved, which is to provide income opportunities for BSS graduate entrepreneurs. CMES needs to be clear how much and for how long TMCs should support enterprises. This determines quantity and scale of sales requirements of TMCs and GPM. Challenges ahead will be how SEY-WO-SEY overall wants to grow into a more comprehensive business entity: this requires business planning, investments and capacity building.

The concept of calculating overheads and depreciation is known at CMES Service office and discussions have been initiated at GPM and in 3 TMCs during the evaluation how to improve

the costing and pricing mechanism at the GPM and TMC level. What has been initiated during the evaluation was an initial process, which requires further follow up and roll out in all 23 units as soon as possible.

Discussions about how to develop a business plan and the vision for sustainability was well understood in the 3 TMCs. It is now essential to continue this process and roll it out in all 23 TMCs. Such a capacity building initiative is crucial, since TMCs should operate more independently with more autonomous. Till date they are strongly controlled by CMES Service Centre's policies and strategies. The consultants feel that this is one very important aspect CMES needs to address: The building of strong leadership at all levels of the organization. This is also valid for the business wing and TMCs in particular.

TMCs till date prefer centralized production to decentralized production. There are valid arguments for centralized production, particularly when it comes to quality assurance. The consultants strongly suggest that TMCs take the route of being a professionally run service centre, which limits its services to up-skilling, business incubation services, design support and coordinating decentralized production. TMCs should NOT be production houses. Till now, only 3 TMCs have been introduced to this concept of TMCs, which incubates enterprises and only facilitates decentralized production. Such conceptual shifts need to be initiated and supported at all levels, including GPM and TMCs.

Business Development:

It is strongly suggested that CMES takes the specialized support of an agency to further consolidate the commercial efforts under SEY-WO-SEY during the next phase. Specific areas to be addressed include:

- For business plan development and capacity building, hire specialized 3rd party for an extended period as mentors for GPM and TMCs.
- Capacity building of staff to assure that all expenditure is accounted in financial data and financial intelligence. It is important that staff in TMCs and GPM better understand finances to be able to monitor health of an enterprise
- Hire experienced staff to strengthen business, marketing, sales particularly at GPM level
- Strengthen quality process and design capacity overall
- Diversify product range and reduce stereotypical business development
- Promote Partnerships and networking: for design, market linkages, exports and national markets. Become a recognized business which is well connected with relevant associations, networks nationally and internationally
- Assess feasibility of showroom vs storage and display facility for B2B meetings
- Revisit all products and assess their viability

Financing / Investment:

During the next phase, exploring various financial options for funding-investment-loans need to be explored. These include:

- Continue to involve local community. Tap local financial resources for financial and in-kind contributions and co-investment
- Develop financing modes for graduate contributions (service fees, membership fees)
- Identify national financial resources, investment and loan options with donors and private sector for funding of SEY-WO-SEY overall.

Documentation/Communication/Visibility

- CMES is a data rich organization, however, requires stronger internal capacities to validate and ensure the quality of data and to use these data for communication, analysis and

internal monitoring. Various data (financial, about graduates etc.) are collected but are not easily available, neither at local nor at the service centre level. Data should be processed regularly, should be disaggregated by sex and in the context of training and TMC specific information, by trades and types of enterprises.

- Expand capacities for data collection, validation, analysis and documentation
- Visibility of CMES is currently strongly linked to a few leaders of the organization. For sustainability, there is a need to increase the visibility of CMES and SEY-WO-SEY. CMES should see this area as a priority and might focus on the following:
 - Capacity building of a larger number of staff to represent CMES effectively in public fora
 - Developing a communication strategy how to approach different stakeholders and how to increase overall visibility (as mentioned in mid term review 2014)
 - Share lessons learned more actively in public fora for better visibility. First efforts have been made with good movies and case studies.
- Undertake more studies and documentation. These studies provide required evidence based on which CMES can sharpen intervention strategy overall and for TMCs in particular.
 - Systematically track and analyze entrepreneurship development process of graduates.
 - Assess multiplier effect: collect data on entrepreneurs over time and monitor their growth with regard to business and how much employment (working hours/days) they generate in addition to their own business.
 - Case studies of successful entrepreneurs and the stages of entrepreneurship.
 - Survey on entrepreneurs, their business practices and income sources to better understand graduate entrepreneurs
 - – Document the strong BSS and AGP programme: the overall programme is truly engendered.

Annexures

A1 Terms of Reference



Basic School System and Adolescent Girls' Program: Modular second chance education with livelihood skills and gender empowerment

Terms of Reference

1. Background

i. The implementing partner: Centre for Mass Education in Science (CMES)

About 40 million adolescents and young adults in Bangladesh are an untapped resource¹, which if properly invested in, could contribute substantially to accelerate the economic and social development of the country. However, limited literacy and inadequate skills training opportunities (lack of orientation to labour demand and to relevant market sectors) often hinder their access to decent and gainful jobs or to successful self-employment.

Since its inception in 1978, the Centre for Mass Education in Sciences (CMES) has been working with SDC's support for strengthening the potential of rural youth through appropriate skills development offers, especially for disadvantaged adolescents who have never enrolled or have dropped out of primary and secondary schools. Sida has been a supporter of CMES since the third phase of the abovementioned project, from 2004.

Over the years, CMES has developed and validated a diversified school system which integrates general education (official basic curriculum) and the development of technical skills for employment or self-employment. CMES also distinguishes itself through its in-built and systemic gender focus. Through its specific Adolescent Gender Programme (AGP), CMES addresses relevant issues of young rural women with the aim to promote their empowerment and to strengthen their socio-economic potentials - an important step towards gender equality and poverty reduction. Rather than only focusing on its training program, CMES is reaching out to rural communities as a whole, and has the additional commitment to make adolescents and young adults respected and involved in their communities, and active in rural development processes.

ii. The Project

The overall goal of the project is to *enable disadvantaged rural adolescents to pursue alternative and diverse options to improve their life and livelihood, by providing a combination of basic educational, technical and life skills, and making them appreciated members of their communities.*

The objective of this project phase builds on the objectives and approaches of the last one. In this phase, CMES focuses on expanding the outreach of its confirmed education model to 26 rural learning units (of which 23, are financed under this project phase), and by intensifying its work through the gender and youth empowerment activities. It expects to reach 30 000 adolescents per year over the projected 4 years (50% more than in Phase 4). Interventions have also been foreseen to increase the quality of products in graduates' micro enterprises and to make them more competitive on local, national and in the further future even on export markets. necessary marketing and entrepreneurial are to be provided by Technology Management Centers (TMCs) to the adolescents in the programme.

¹Non Formal Education (NFE) Mapping Report 2009 of the Bureau of Non Formal Education (BNFE).

2. Purpose

A Final Evaluation will be carried out for Phase 5 of the project in May 2015. This review will specifically look at the Technical Management Centers (TMCs) that have been set up by CMES in Phase 5 of the project. The purpose of this consultancy is to assess the TMCs and to recommend whether it is possible to make these centers sustainable within a limited time frame. The recommendations from this review will be included in the Final Evaluation.

3. Objective

The specific objectives of the review are to:

- a) Assess how TMCs operate and whether they meet their objectives;
- b) Evaluate whether the principles of business (as discussed in the Final Evaluation Report of Phase 4 of the project) are applied in the running of TMC and make recommendations on how they may be improved;
- c) Assess the added value that TMCs make to entrepreneurship of graduates;
- d) Analysis whether the TMCs utilizes resources in an economic and effective manner;
- e) Of the TMCs visited, pick at least 2 centers and show how long the TMCs will take to become sustainable (it is expected that CMES will provide all data related to the TMCs to SDC and Sida prior to the evaluation – this will be provided to the consultant). The 2 centers chosen by the consultant will in one case show TMCs that may become self-dependent very quickly and in the other case, take longer. This exercise is to be done together with CMES staff, so that they understand the model and can apply it to all other TMCs;
- f) Analyze the prospects for TMCs to further develop and indicate the strategic direction for its future (including the current and potential sources of finance for TMCs);
- g) Recommend whether TMCs should be included in the next phase of the project and if so, the kind of support (technical/financial) is required and possible timeframe ;
- h) Design a sustainability vision for the TMCs that will allow the unit to become independent of the project, which will not require external funding.

The expected results, as defined in the proposal of Phase 5 Basic School System and Adolescent Girls' Program: Modular second chance education with livelihood skills and gender empowerment, (from 01 June 2011 to 31 May 2015) forms the basis of this review.

4. Work methods

The review is to be conducted in a participative manner, permitting the sounding out of all relevant stakeholders (from beneficiary level up to the programme management, the government and other relevant stakeholders) to ensure the full benefit from the experience gained during this fifth phase. The consultant may apply different work methods (including, but not limited to) to ensure that all the issues are taken up in the best possible manner.

- Literature review: review of the documentation drawn up in the context of CMES and other documentations as deemed pertinent. A non exhaustive document list is provided in section below.
- Interviews with all different stakeholders, including but not limited to, programme staff (field/HQ), relevant government officials, SDC and Sida representatives and any other similar business model representatives.
- Field visit (adolescent beneficiaries, their families, instructors of the schools, local government representatives in the school committee, etc.).

Documents to be provided to reviewers

- Project document (including the budget, workplan and logframe), all progress reports, annual plans of operation of the project, and audit reports for Phase 5 – to be provided by CMES
- End of Phase Evaluation (for phase 4), mid-term report for previous phase – to be provided by CMES
- Mid term Review report of Phase 5
- Various publications of CMES – to be provided by CMES
- SDC Cooperation Strategy (2013-2017), Sida's Cooperation Strategy

5. Timeframe

The mission is expected to take place from June to July 2015, with a total of twenty working days.

The methodology and the detailed program of the review will be worked out and finalized by the consultant. The consultant will share its plan with SDC, Sida and CMES, prior to finalization.

Activities	No. of days
Preparation	2
Briefing Meeting: Introduction to the assignment and workplan	0.5
Meeting with CMES management and staff	2
Field Visit (to at least 5 TMCs)	8
Meetings with different stakeholders	1
Presentation of review findings and discussion on the recommendations	0.5
Report writing (and finalization of report after receiving comments from SDC, Sida and CMES)	6
<i>Total (number of consultant days)</i>	20

The maximum number of days for the consultancy is 20 working days.

A draft report will be produced 15 July 2015 and is to be finalized after incorporating comments from SDC, Sida and CMES. The final report is to be submitted to SDC and Sida by 30 July 2015.

Please provide a pragmatic estimate of how long it will require for the consultant to complete the task. It will not be possible to extend/amend the contract at a later stage.

6. Outputs

A report of maximum 20 pages (Ariel Font 11, single-spaced) on results achieved till date, an analysis of the current model, SWOT (strength, weaknesses, opportunities and threats) and the way forward

A2: List of Resources consulted

CMES Reports

CMES (2010): Project Document 5th phase (period: 1st June 2011 – 31 May 2015).

CMES (2015): TMC Presentation: PowerPoint Presentation.

CMES: Annual Plan of Operation (APO):

- June 2011- May 2012
- June 2012- May 2013
- June 2013 – May 2014

CMES: Bi- Annual Operational Report

- period: June 2011- November 2011
- period: June 2012- November 2012
- period: June 2013-November 2014

CMES (2015): Sustainability Report

CMES (2015): GPM Vision

CMES: TMC overall and Unit Wise Reports

SDC/SIDA (2010): The Phase End Evaluation of Phase IV (period: September' 2007 – February' 2011)

SDC/SIDA: (2014): MTR Report, 2014

A3: Mission Schedule:

Schedule for the Technology Management Centre (TMC) evaluation: Suruj, Tangail; Damkura, Rajshahi; Nayadiari, Chapainowabgonj; Deuty, Rangpur and Ranirbandar, Dinajpur unit

21 June-2nd July 2015

<i>Date</i>	<i>Time</i>	<i>Planned Activities</i>
21 June '15 Sunday Day-1	04.20pm	Arrival at Hazrat Shahjalal International Airport, Dhaka. Senior Management Staff of CMES will receive the consultant from the airport and travel from airport to the Dutch Club, Address: House 33, Road # 74, Gulshan – 2, Dhaka – 1212, Bangladesh, Phone: +880-2-8823877/8821892/9880931
22 June '15 Monday Day-2	09:30am -10:00am	Start from Dutch Club and arrival at CMES, House # 823, Road # 19 (old), Dhanmondi R/A, Dhaka-1209.
	10:00pm – 04:30pm	Meeting with project team of CMES including Lunch
	04:30pm	Return to Dutch Club
23 June '15 Tuesday Day-3	06:30am – 10:00am	Check out and start from Dutch Club through CMES's own transportation and arrival at Suruj Unit, Tangail.
	10:00am – 10:15am	Introduction with the Rural Technology Centre's (RTC) Management and refreshment.
	10:15am – 10:45am	Visit the TMC (observe TMC activities) and meeting with 10-15 trainees
	10:45am – 11:45am	Meeting with 8-10 Self Employed graduates (on graduate income and other relevant issues)
	11:45am – 12:45pm	Meeting with 5-7 customers (on demand, quality etc. of TMC products and other relevant issues)
	12:45pm – 01:30pm	Meeting with Trainer (AT), Organizer Trade (OT)
	01:30pm – 01:45pm	Lunch
	01:45pm – 02:15pm	Meeting with Local Governments (on impact of TMC on community and other relevant issues)
	02:15pm – 06:30pm	Travel to Rajshahi at Parjatan Motel (Abdul Majid Road, Rajshahi, Phone: 880-721-775237, 770247).

<i>Date</i>	<i>Time</i>	<i>Planned Activities</i>
24 June '15 Wednesday Day-4	08:00am – 09:00am	CMES representative will receive the consultant from Parjatan Motel. Travel to Damkura, Rajshahi through CMES's own transportation.
	09:00am – 09:15am	Introduction with the Rural Technology Centre's (RTC) Management
	09:15am – 10:10am	Meeting with TMC management: Trainer (AT), Organizer Trade (OT)
	10:15am – 10:30am	Visit the TMC (observe TMC activities) and meeting with 10-15 trainees.
	10:30am – 01:45pm	Process with TMC and RTC staff on a) income-expenditure, costing, b) need for business plan and expansion and c) vision of TMCs
	01:45pm – 02:00pm	Lunch
	02:00pm – 02:30pm	Meeting with 5-7 customers (on demand, quality etc. of TMC products and other relevant issues)
	02:30pm – 03:00pm	Meeting with Local Governments (on impact of TMC on community and other relevant issues)
	03:00pm – 03:30pm	Meeting with CWC and parents of the trainees
	03:30pm – 04:00pm	Meeting with elites/opinion makers/community leader
25 June '15 Thursday Day-5	04:00pm – 05:00pm	Return to Parjatan Motel
	07:30am – 09:30am	Travel from Rajshahi to Nayadiari, Chapainowabganj unit through CMES's own transportation.
	09:30am – 09:45am	Introduction with the Rural Technology Centre's (RTC) Management and refreshment.
	09:45am – 10:45am	Visit the TMC (observe TMC activities) and meeting with 10-15 trainees.
	10:45am – 11:45am	Meeting with 8-10 Self Employed graduates (on graduate income and other relevant issues).
	11:45am – 12:30pm	Meeting with Trainer (AT), Organizer Trade (OT)
	12:30pm – 01:45pm	Focus group discussion with women trainees and graduates
	01:45pm – 02:00pm	Lunch
	02:00pm – 02:30pm	Meeting with 5-7 customers (on demand, quality etc. of TMC products and other relevant issues)
02:30pm – 03:00pm	Meeting with Local Governments (on impact of TMC on community and other relevant issues)	
03:00pm – 03:30pm	Meeting with CWC and parents of the trainees	

	03:30pm – 04:00pm	Meeting with elites/opinion makers/community leader
	04:00pm – 06:00pm	Return to Parjatan Motel, Rajshahi

Date	Time	Planned Activities
26 June '15 Friday Day-6	07:30am – 02:00pm	Travel by car from Rajshahi to RDRS Guest House (Jail Road, Dhap, Rangpur, Tel: +88 0521 66490-93.
	02:00pm – 02:30pm	Lunch
	03:30pm – 05:30pm	Discussion with unit staff / CMES personnel as per the requirement of the consultant
27 June '15 Saturday Day-7	08:00am – 09:00am	Travel from RDRS Guest House to Deuty unit through CMES's own transportation.
	09:00am – 09:30am	Introduction with the Rural Technology Centre (RTC) Management, Management TMC
	09:30am – 12:30pm	Process with TMC and RTC staff on a) income-expenditure, costing, b) need for business plan and expansion and c) vision of TMCs
	12.30-01:45pm	Meeting with 8-10 Self Employed graduates (on graduate income and other relevant issues and trainees.
	01:45pm – 02:00pm	Lunch
	02:00pm – 02:45pm	Meeting with 5-7 customers (on demand, quality etc. of TMC products and other relevant issues)
	03.00pm – 04:00pm	Visit of TMC and feedback on work practices and systems
28 June '15 Sunday Day-8	04:00pm – 05:00pm	Return to RDRS Guest House
	07:30am – 09:30am	Travel from RDRS Guest House to Ranirbandar, Dinajpur unit through CMES's own transportation.
	09:30am – 09:45am	Introduction with the Rural Technology Centre (RTC) Management and refreshment.
	09:45am – 12:30pm	Process with TMC and RTC staff on a) income-expenditure, costing, b) need for business plan and expansion and c) vision of TMCs
	12.30-01:45pm	Meeting with 8-10 Self Employed graduates (on graduate income and other relevant issues and trainees.
	01:45pm – 02:00pm	Lunch
	02:00pm – 02:45pm	Meeting with 5-7 customers (on demand, quality etc. of TMC products and other relevant issues)
29 June '15 Monday Day-9	03.00pm – 04:00pm	Visit of TMC and feedback on work practices and systems
	04:00pm – 06:00pm	Return to RDRS Guest House
	07:30 +	Travel from Rangpur to Dhaka by Air
30 June '15 Tuesday Day-10	09:30am – 10:00am	Travel from Hotel to CMES through CMES's own transportation.
	10:00am – 12:00pm	Meeting with relevant stakeholder (Buyer, Super store)
	12:00pm – 02:00pm	Meeting on sustainability of TMC with CMES management including lunch
	02:00pm +	Writing of report
01 July '15 Wednesday Day-11	09:00am – 10:00am	Stay in Gulshan
	10:00am - 12:30pm	Writing of Report
	12:30pm – 01:00pm	Lunch
	01:00pm – 02:00pm	Travel from CMES to SDC
	02:00pm – 04:00pm	Debriefing at SDC
02 July '15 Thursday Day-12	07:00am	Departure to Airport
	10:10am	Flight back to Mumbai-Bangalore

Date	Time	Planned Activities
29 June '15 Monday Day-9	07:30 +	Travel from Rangpur to Dhaka by Air
30 June '15 Tuesday Day-10	09:30am – 10:00am	Travel from Hotel to CMES through CMES's own transportation.
	10:00am – 12:00pm	Meeting with relevant stakeholder (Buyer, Super store)
	12:00pm – 02:00pm	Meeting on sustainability of TMC with CMES management including lunch
	02:00pm +	Writing of report

01 July '15 Wednesday Day-11	09:00am – 10:00am	Stay in Gulshan
	10:00am - 12:30pm	Writing of Report
	12:30pm – 01:00pm	Lunch
	01:00pm – 02:00pm	Travel from CMES to SDC
	02:00pm – 04:00pm	Debriefing at SDC
02 July '15 Thursday Day-12	07:00am	Departure to Airport
	10:10am	Flight back to Mumbai-Bangalore

Contact:

Sl.	Unit	Mobile No. (UO)
01.	Suruj, Tangail	: 01711405196
02.	Damkura, Rajshahi	: 01711869590

03. Nayadiari, Chapainowabgonj : 01711400492
 04. Deuty, Rangpur : 01711400495
 05. Ranirbandar, Dinajpur : 01711400496
 06. Service Centre Representative 01914-799502
 (S. M. Hadiuzzaman, Deputy Project Coordinator);
 01190-639309 (Mirza Md. Rafiqul Islam, Deputy Project Coordinator);
 01713202729 (Md. Ashiquzzaman, Senior Programme Manager)
 07. Dutch Club, Gulshan House 33, Road # 74, Gulshan – 2, Dhaka – 1212, Bangladesh, Phone: +880-2-8823877/8821892/9880931

List of People Met

Name	Organisation
Dr. Muhammand Ibrahim	CMES, Chairman
Mrs. Hassan Banu Daisy	CMES, Executive Director
S.M. Hadiuzzaman	CMES, Deputy Programme Director
Mirza Md. Rafiqul Islam	CMES, Deputy Programme Director
Mrs. Mariam Akter	CMES, Gender
Md. Ashiquzzaman	CMES, Programme Manager
Khalid Ahsan	CMES, TIG
UO: Sunil Kumar Roy OT: Hassan Mahmud	CMES Suruj, Tangail, Unit Team
UO: Md. Atiar Rahman OT: Md. Sakhawat Hossain	CMES Nayadiary, Chapainababganj Unit Team
UP: K.M. Asaduzzaman OT: Md. Jahangir Hussain	CMES Dampura, Rajshahi Unit Team
UO: Hemonto Kumar Roy OT: G.M. Abdur Razzaque	CMES Ranirabandar, Dinajpur, Unit Team
UO: Nihar Ranjan Das OT: Md. Abdus Samad Azad	CMES Deuty, Rangpur, Unit Team
	Clients/direct customers in all 5 units
	Graduates running micro enterprise in 5 all units
	Graduate trainees in 5 TMC
	Local Government, union council members in 3 TMCs
	CWC members and parents in 3 TMCs
	Customers/Buyers/Retailers in Dhaka

A4 About CMES

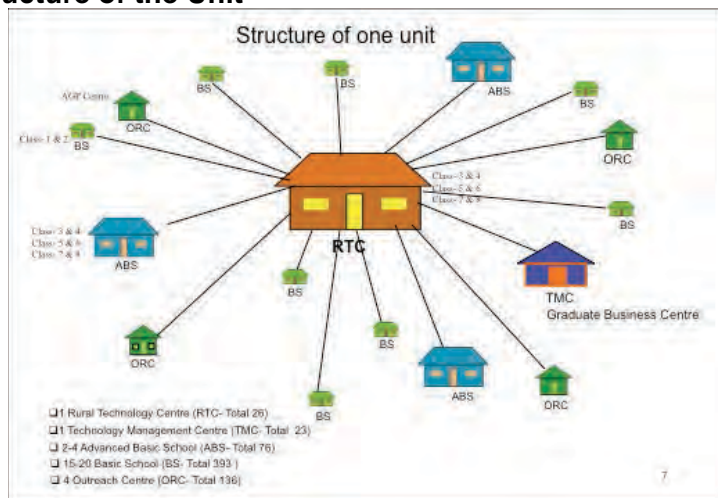
CMES Vision

- i. All adolescents and young people can pursue an education, effective in their life and livelihood, irrespective of their gender, economic situation of the family, or any other special situation. In case some of them have to discontinue in the formal system for some reason, they can always avail an alternative opportunity for a meaningful continuation.
- ii. At the same time, all adolescents and young people, irrespective of their gender, and of any disadvantage they might suffer from, should be empowered to assert their rights and avail equal opportunities for pursuing a decent quality of life.
- iii. Appropriate existing and emerging technologies can be adapted by the rural young people, to practice at the market level for the betterment of their life and livelihood.

CMES Mission

- i. To provide alternative and diverse options to young people so that they can make best for themselves according to their circumstances, aptitude and wishes. The options should come in terms of education, skill training, livelihood opportunities etc. These should be user-friendly, participatory effective and sustainable for all concerned.
- ii. To connect the disadvantaged young people with the wider market where they can profitably operate, and also to connect them with the appropriate emerging technologies to their benefit.
- iii. To empower the young people to assert their rights, to develop their personalities and self esteem as useful and contributing citizens of the country; with especial attention to gender equity and gender empowerment of adolescent girls and young women.

Structure of the Unit



Source: CMES (2013): CMES at a Glance. Power point made on 3rd April 2013

The CMES process of setting up units is fairly standardized and most Units comprise of a RTC, TMC, between 2-4 Advanced Basic Schools (ABS) and approximately 15-20 BS.

BS: Each basic school is a community based learning centre in the village, providing elementary education up to class 2 with the help of 1 general teacher and 1 technical teacher to approximately 30 drop-out children, who are above 12 years old. Currently BS training follows a curriculum, applies highly participative and context based learning methods and encourages children to have exposure into various vocational skills as a part of their holistic

development. Usually, teachers are locals and selected and trained by the service centre in Dhaka. It is the aim of BS to ensure basic literacy and numeracy as per national educational standards 1/2 and make children understand the relevance of learning and how exposure to specific practical vocational skills enables them to build the basis for sustainable income opportunities in a particular vocational trade. BS is usually co-financed by the villages and CMES (village provides land, usually takes care of the building and maintenance).

ABS: usually offer non-formal education from class 3 up to 8 standard, in combination with several vocational trades to graduates from BS during 3 years. CMES offers 20 trades in total, but usually provides around 4 trades in ABS according to the demand of the students and the technical teachers available. ABS have limited or no access to electricity, which determines the trades which can be taught. Dominant trades are carpentry, garment making, welding and increasingly vermin compost/mushroom making. Additional trades are being added, as there seems to be demand in the market.⁸ ABS is mostly co-financed with the villages, as land and maintenance of the school is taken care by the representatives in CWC. ABS are rural to be accessible to students to ensure continuation of education and skills development up to at least 8 standard or up to the age of 15/16 years. There are usually 20 students per trade /y/ABS.

RTC: also provides advanced education, combined with vocational training to BS graduates, is however better equipped to offer specific trades which require more equipment and electricity. Besides coordinating all other operations and capacity building and monitoring functions through, RTC also offers short courses to school graduates in specific vocational streams and supports TMC in placement of students, enterprise development and business development. An RTC has usually app. 20-30 staff, which includes senior teachers in charge of quality of teaching in BS, ABS and RTC, ATs (general and technical education), administration and management for RTC and TMC, gender coordinator and peer leaders who implement the AGP.

TMC: Graduates from ABS and RTC who seek further production related and enterprise related training can opt to enroll in the TMC. The TMC acts as a marketing-business entity that represents graduates in the market and facilitates production and ensures quality of decentralized production. It also procures materials, does the costing for products and seeks to be financially self-sustaining in the long run.

AGP: aims at developing sustainable community based advocacy and action programmes for adolescent boys and girls and young women to change the role of women in the society and address women's empowerment, which includes community based action against discrimination, violence against women, early marriage and dowry related issues. AGP works in schools (school gender programme) at village and union levels and builds community based support groups (students' government, Adolescent Traveling Troupe, youth associations, local support groups) and networks like the advanced adolescent and through women organization (AAYWO). AGP coordinators and peer leaders mobilize in the villages; facilitate the building and strengthening of organizations and networks and further lobby through campaigns and interaction at the local and increasingly national level for the rights of women.

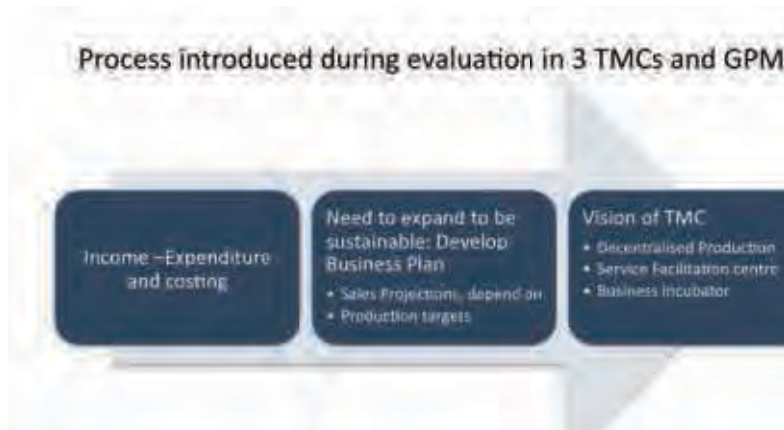
Outreach centers or ORC: are small units, which support the Adolescent girls programme to undertake trainings and awareness programmes, while bringing several villages together to consolidate and further learnings from each others' activities.

⁸ See CMES (2014): CMES at a glance. Power point made on 3rd April 2014

A5 Questions for TMC Assessment

1. **Meeting RTC Team**
 - Brief introduction into RTC, current activities, focus
 - Information about number of students at BS/ABS/RTC/TMC level
 - Number of graduates 2014 by type
 - Wage employed/ placed
 - Self-employed, and % taking loans
 - Self-employed going for TMC
 - Else (going back to school, migrated, unemployed/not active)
 - Information about graduates going into self-employment, their perspectives and markets
 - Current status of TMC from RTC perspective
 - Type of support to TMC (HR/financial)
3. **Meeting Graduate micro entrepreneurs**
 - Introduction
 - Time of graduation
 - Taken loan? For what purpose?
 - Economically active
 - Clientele
 - Income?
 - How many employees?
 - Any plans to expand?
 - Check some selected accounts
 - How do they use TMC? Do they pay any service charges?
5. **Meeting with Clients/Customers**
 - Introduction
 - What do clients buy from TMC?
 - Feedback on service, delivery and quality
 - Scope for improvement
 - Suggestions
7. **Meeting with Local Government Leaders**
 - Overall understanding of CMES and TMC
 - How does TMC contribute to local development
 - How do they support the children's business (financially, marketing support)?
 - How can Local Leadership further support TMC?
2. **Meeting TMC**
 - Brief introduction into TMC, current activities, focus
 - Vision and role of TMC
 - Information about market situation/clientele, how they are approached.
 - Present current market situation, sales, challenges
 - Discuss income-expenditure
 - Costing
 - Discuss type of production, decentralized/centralized
 - Describe process/documentation
4. **Meeting graduate trainees in TMC**
 - Introduction
 - Time of graduation
 - Taken loan? For what purpose?
 - Economically active?
 - Clientele?
 - Income?
 - How do they use TMC? Do they pay any service charges? Other clients?
 - Are they ready to pay for TMC services?
 - When plans to leave?
6. **Meeting with CWC and parents of graduates**
 - Overall understanding of TMC
 - What are their children engaged with
 - How do they support the children's business (financially, marketing support)?
 - How can CWC and parents further support TMC?
8. **Meeting GPM/Service Centre**
 - Overall understanding of SEY-WO-SEY
 - Services provided for
 - Income-Expenditure
 - Sales and sales channel development
 - Issue of credit and recovery
 - Challenge of decentralized sourcing and quality assurance
 - Challenges (marketing, visibility, display and delayed delivery)
 - Future ideal form of GPM and TMC

A6 Process undertaken in TMCs



Sales/expenditure, costing

1. Income	
• Sales units	
• GPM rate	
	Support
2. Expenditure	
2.1 Production Costs (Taka unit)	
• Raw Materials	
• Labour	
• Fuel	
• Packaging	
• Depreciation	
• Rent/lease	
2.2 Operational Expenses	
• Salaries	• GCM, TMC
	• P/B, P/C, D
	• P/B, P/C, A/B
	• Sales TMC
• Overheads	• Electricity
	• Rent
	• Maintenance
• Transport	
	• Spd. Time
Income/expenditure (1-2)	
SDC/State funding	
Income/expenditures SDC/State funding	

How to reach break even point/achieve profit

Increasing Sales (and production)

1. Market expansion, local and national and international
 - Develop sales channels
 - New designs/product development
 - Investment into training and equipment
 - Costing improvement
2. Fee based Services (Training, usage of machinery, for design support)

Reducing expenditures

- Bulk purchase
- Reduce wastage (trade wise wastage documentation)
- Consistent quality
- Good maintenance
- Save Transport costs

We need a Business Plan

- Marketing Strategy, inclusive sales channels (distributors, etc. for each trade)
- Investments in equipment, technology and Human resources
- Production strategy based on capacity and sales projections
- Assess production capacity

Vision for TMCs to reach sustainability

Centralized production	Decentralized production
Advantages <ul style="list-style-type: none"> • Production house under one roof • Modern machineries • Quality assurance • More capacity 	Advantage <ul style="list-style-type: none"> • High production capacity • Flexibility of order • Risk sharing
Disadvantage <ul style="list-style-type: none"> • High fix costs • Limited expansion capacities • Graduates as 'labourers' • High investment requirements 	Disadvantage <ul style="list-style-type: none"> • Lack of Consistency assurance • Lack of machineries • Timely delivery • Big coordination cost

In order to scale, we need a mix between centralised and mainly decentralised production

CMES vision for TMC

For graduate

Development of entrepreneurship at community level
Starting Small Business and expand to small enterprise, employing people
High quality production

What will be in TMC

Incubation of graduate
Skill development training (with charge)
Product development (R&D)
Use modern machineries
Product finishing
Product distribution
Quality assurance
Linking entrepreneurship with financial institution

A7: Income Expenditure (new format) for all TMCs and GPM

Income-Expenditure Statement: All TMC

	Y1 (2011)	Y2 (2012)	Y3 (2013)	Y4 (2014)
1.Sales/Income				
Sales Local	16,181,207	16,743,408	17,802,809	22,290,053
Sales from GPM/National	964,963	1,604,922	1,625,905	1,641,685
Incubation (Not Applicable)				
Bank Interest and others	14,060	45,347	27,975	30,316
Sales/Income Subtotal	17,160,230	18,393,677	19,456,689	23,962,054
2.Expense				
2.1 Production/Outsourcing (Includes materials etc)				
Raw materials	12,773,826	15,019,037	17,124,983	21,367,980
Outsourcing /Contracting charges	1,970,703	2,103,949	2,569,997	3,042,423
Finishing/Packaging *1				
Development costs *2				
Subtotal	14,744,529	17,122,986	19,694,980	24,410,403
2.2 Operational Expenditure				
Marketing /Sales/Branding				
Consumables/Materials	565,650	1,045,245	1,085,392	1,142,143
Salaries (TMC)**	1,305,069	6,478,952	6,624,666	8,090,222
Accountnt's Salary (RTC) (20%)	671,840	705,432	811,424	851,995
UO's Salary (15%)	666,900	700,245	805,457	845,730
TA Salariv (20%)	1,501,760	1,576,848	1,813,770	1,904,459
Transport	31,412	181,727	227,834	305,043
Depriciation (10%)	230,512	457,633	509,813	569,702
Maintenance	79,433	33,249	116,382	90,936
Overhead**	346,099	966,930	1,119,583	1,330,151
Subtotal	5,398,675	12,146,261	13,114,321	15,130,381
Income-Expenditure	(2,982,974)	(10,875,570)	(13,352,612)	(15,578,730)
Donor funding SDC and SIDA***	7,528,386	14,248,198	13,668,093	15,757,736
Income-Expenditure: Profit/loss plus funding fill up	4,545,412	3,372,628	315,481	179,006

*Salaries	**Overheads	*** Donor Funding
OT, AT, CTNG	Rent	Salary & Benefits
	Electricity, Water	Technology
	Telephone	Consumables
	Materials	Transport, TA & DA
		Rates & Utilities
		Rent for TMC
		Safety and Ecological Measures
		Repairs & Maintenance

*1 & *2: These costs are included in materials cost.

Income-Expenditure Statement: GPM

	Y1 (2011)	Y2 (2012)	Y3 (2013)	Y4 (2014)
1.Sales/Income				
Sales Local				
Sales from GPM/National	964,963	1,604,922	1,625,905	1,641,685
Incubation (Not Applicable)				
Bank Interest and others (Not Applicable)				
Sales/Income Subtotal	964,963	1,604,922	1,625,905	1,641,685
2.Expense				
2.1 Production/Outsourcing (Includes materials etc)				
Raw materials				
Purchase from TMC	839,098	1,395,584	1,413,830	1,427,552
Finishing/Packaging *1			12,000	
Development costs *2	30,000	30,000	30,000	30,000
Subtotal	869,098	1,425,584	1,455,830	1,457,552
2.2 Operational Expenditure				
Marketing /Sales/Branding *3	60,000	60,000	60,000	60,000
Consumables/Materials				
Salaries (GPM)*	744,760	731,129	592,321	855,900
Transport (avarage method) *4	144,000	144,000	144,000	144,000
Depriciation				
Maintenance	2,000	2,000	2,000	2,000
Overhead**5	79,200	79,200	79,200	79,200
Subtotal	1,029,960	1,016,329	877,521	1,141,100
Income-Expenditure	(934,095)	(836,991)	(707,446)	(956,967)
Donor funding SDC and SIDA***	999,960	986,329	847,521	1,111,100
Income-Expenditure: Profit/loss plus funding Fill up	65,865	1,49,338	1,40,075	1,54,133

*Salaries	**Overheads	*** Donor Funding
OT, AT, CTNG	Rent	Salary & Benefits
	Electricity, Water	Technology
	Telephone	Consumables
	Consumables/Materials	Transport, TA & DA
		Rates & Utilities
		Rent for TMC
		Safety and Ecological Measures
		Repairs & Maintenance

*1 & *2: These costs are included in materials cost.

*3, *4 & *5: Assumption based average.

A8: Income-Expenditure Statements Damkura-Deuty

Income-Expenditure Statement: Damkura

	Y1 (2011)	Y2 (2012)	Y3 (2013)	Y4 (2014)
1.Sales/Income				
Sales Local	1,188,031	14,83,648	1,985,290	2,408,404
Sales from GPM/National	102,927	142,104	162,939	162,900
Incubation (Not Applicable)				
Bank Interest and others				
Sales/Income Subtotal	1,290,958	16,25,752	2,148,229	2,571,304
2.Expense				
2.1 Production/Outsourcing (Incl. materials etc)				
Raw materials	1,219,236	1,610,908	2,669,814	2,335,293
Outsourcing /Contracting charges	195,772	195,075	306,113	335,951
Finishing/Packaging				
Development costs				
Subtotal	1,415,008	1,805,983	2,975,927	2,671,244
2.2 Operational Expenditure				
Marketing /Sales/Branding				
Consumables/Materials	25,700	43,300	117,643	61,150
Salaries (TMC)*	108,200	330,186	393,092	411,852
Accountnt's Salary (RTC) (20%)	35,360	37,128	38,984	40,934
UO's Salary (15%)	35,100	36,855	38,698	40,633
AT Salary (20%)	79,040	82,992	87,142	91,499
Transport	4,455	4,540	11,913	13,435
Depriciation (10%)	12,050	23,425	34,168	31,431
Maintenance	2,600	900	10,210	1,500
Overhead**	16,444	24,584	57,073	67,116
Subtotal	318,949	583,910	788,923	759,550
Income-Expenditure	(442,999)	(7,64,141)	(1,616,621)	(859,490)
Donor funding SDC and SIDA***	279,699	529,310	720,781	561,853
Income-Expenditure: Profit/loss plus funding	(1,63,300)	(2,34,831)	(8,95,840)	(2,97,637)
		*Salaries	**Overheads	*** Donor Funding
		OT, AT, CTNG	Rent	Salary & Benefits
			Electricity, Water	Technology Consumables
			Telephone	Transport, TA & DA
			Safety & Ecological Materials	Rates & Utilities
				Rent for TMC
				Safety and Ecological Measures
				Repairs & Maintenance

Income-Expenditure Statement: Deuty

	Y1 (2011)	Y2 (2012)	Y3 (2013)	Y4 (2014)
1.Sales/Income				
Sales Local	520,200	650,094	812,019	1,145,138
Sales from GPM/National	125,063	155,500	195,800	98,551
Incubation (Not Applicable)				
Bank Interest and others				
Sales/Income Subtotal	645,263	805,594	1,007,819	1,243,689
2.Expense				
2.1 Production/Outsourcing (Inc. materials etc)				
Raw materials	509,850	478,559	792,592	1,194,463
Outsourcing /Contracting charges	163,432	143,396	179,648	340,544
Finishing/Packaging				
Development costs				
Subtotal	673,282	621,955	972,240	1,535,007
2.2 Operational Expenditure				
Marketing /Sales/Branding				
Consumables/Materials	27,500	80,984	38,550	57,150
Salaries (TMC)*	126,894	323,660	358,380	452,124
Accountnt's Salary (RTC) (20%)	35,360	37,128	38,984	40,934
UO's Salary (15%)	35,100	36,855	38,698	40,633
AT Salariy (20%)	79,040	82,992	87,142	91,449
Transport	620	3,830	20,786	9,165
Depriciation (10%)	12,050	25,305	28,365	27,528
Maintenance	2,600	900	10,471	6,889
Overhead**	8,000	36,000	88,956	60,169
Subtotal	327,164	627,654	710,332	786,041
Income-Expenditure	(355,183)	(444,015)	(674,753)	(1,077,359)
Donor funding SDC and SIDA***	288,614	596,020	537,807	613,707
Income-Expenditure: Profit/loss plus funding	(66,569)	152,005	(136,946)	(4,63,652)

*Salaries	**Overheads	*** Donor Funding
OT, AT, CTNG	Rent	Salary & Benefits
	Electricity, Water	Technology Consumables
	Telephone	Transport, TA & DA
	Safety & Ecological Materials	Rates & Utilities
		Rent for TMC
		Safety and Ecological Measures
		Repairs & Maintenance

A8 Projections of Sales for Scenarios 1 and Scenario 2

Scenario 1: Constant number of Graduates benefiting from TMCs for Marketing

Note: These Data are indicative data. These data are not as yet collected systematically and need validation

No graduates	y1	y2	y3	y4
Group 1, TMC	15	15	15	15
Group 2	10	10	10	10
Group 3	10	10	10	10
Group 4	10	10	10	10
TOTAL Graduates	45	45	45	45

Required sales to be generated:

Assumptions: income/p/m: 5000
Labour: 20 % of overall Sales projection

% of outsourced work per group	y1	y2	y3	y4
Group 1, TMC	0.5	0.5	0.5	0.5
Group 2	0.3	0.3	0.3	0.3
Group 3	0.2	0.2	0.2	0.2
Group 4	0	0	0	0

After year 4: no production support from TMC

Sales BDT projection based on %/year/group	y1	y2	y3	y4
Group 1, TMC	2,250,000	2,250,000	2,250,000	2,250,000
Group 2	900,000	900,000	900,000	900,000
Group 3	600,000	600,000	600,000	600,000
Group 4	-	-	-	-
TOTAL Sales required	3,750,000	3,750,000	3,750,000	3,750,000

Margins TMC: 20% 750,000.0 750,000.0 750,000.0 750,000.0

Scenario 2

Growing number of Graduates benefiting from TMCs for Marketing

Note: These Data are indicative data. These data are not as yet collected systematically and need validation

No graduates	y1	y2	y3	y4
Group 1, TMC	15	15	15	15
Group 2	10	10	10	10
Group 3	10	10	10	10
Group 4	10	20	30	40
TOTAL Graduates	45	55	65	75

Required sales to be generated:

Assumptions: income/p/m: 5000
Labour: 20 % of overall Sales projection

% of outsourced work per group	y1	y2	y3	y4
Group 1, TMC	0.5	0.5	0.5	0.5
Group 2	0.3	0.3	0.3	0.3
Group 3	0.2	0.2	0.2	0.2
Group 4	0.1	0.1	0.1	0.1

From year 4: production support 10%

Sales BDT projection based on %/year/group	y1	y2	y3	y4
Group 1, TMC	2,250,000	2,250,000	2,250,000	2,250,000
Group 2	900,000	900,000	900,000	900,000
Group 3	600,000	600,000	600,000	600,000
Group 4	300,000	600,000	900,000	1,200,000
TOTAL Sales required	4,050,000	4,350,000	4,650,000	4,950,000

Assumed TMC %:

20%: 810,000 870,000.0 930,000.0 990,000.0