emeronTI 4

smasFatbeckvTüa

Technology Components

I-eKaIbINgénemeron

kgemeronmn²eyg)anskSaRTsCaeRcnGBIbeckvTüa ng\TBIrbsvamkeIGaCvkmsgm ng karRKbRKg. kgemeronenHeygngskSaeTAeIRTsmycnnEdICaesckRtvkaredIm,begItmIdan beckvTüasrabGgPaBmy. eRkayeBIbBabemeronT4enHnsStngGacEsgyInvcncmycnndc xageRkam³

-etIsmasFatbeckvTüaGIxHEdIGgPaBmyRtvGPvDÆn?

-etIsmasFatbeckvTüaTagenaHmanTnakTngKayagdcemc?

II-Process Technology

Process Technology sedAeTAeIteNIrkarbgsmasFatepSg²EdIeRbkgkarpItpItpI beckvTüa. kgenaHsmasFatrbsbeckvTüasxan²EdIGgPaBKrBcarNamandcxageRkam³

- smasFattNageGayvt (The object-embodied component of Technology) "Technoware"
- smasFattNageGaymnsS (The human embodied component of technology)"Humanware"
- smasFattNageGayGgPaB (The institution embodied component of technology) "Orgaware"
- smasFattNageGayBtman (The document embodied component of technology "Inforware")

Technoware

sedAeTAeI]bkrN sPar³ brka masIn EdIeKeeRbsrabCnyeGaykIagBIFmCatrbsmnsS eFI eGayRbtbtkargarrbsmnsSkanEtmanRbsTPaB. TechnowaremannaTRKbRKgeTAeIteNIrkar bEIg (Input to Output) dca)acmykgpItkmpgEdr.

Object-embodied physical facilities, such as: tools; devices; equipment; machinery; structures—called Technoware—which enhance human physical powers and controls for all necessary transformation operations.

Humanware

sedAeTAeIsmtPaBrbsmnsS (FnFanmnsS) Humanware mandcCaCnaj cenHdg eTBekasIü KntécRbDtrbsbKIkkgRkmhn . Humanware mannaTeRbR)asFnFanvtFat edIm ngFnFan beckvTüaEdIGgPaBmankgeKaIedApItkm ng esvakm.

Person-embodied human abilities, such as: skills; knowledge; expertise; creativity—called Humanware—which contribute to actual utilization of available natural and technological resources for productive purposes;

Orgaware

sedAeTAeI vFsaRs beckeTs karTnakTng ng karGnvtrbsGgPaB. Orgaware man tnaTsrbsrIskmPaBpItkmTagmIrbsGgPaBeFyagNaeGayserc)anTsedA.

Institution-embodied organizational frameworks, such as: methods; techniques; linkages; networks; practices—called Orgaware—which coordinate all productive activities of the enterprise for achieving purposeful results.

Inforware

sedAeTAeIbNBtmanepSg²rbspItkm besvakm dcCaRBEdnénpItpI pItpICakIak KeragpItpI Rbtbtkar ng rebobeRbR)as Cak,nxatepSg². Inforware pInvPaBgayRsI kgkarTTIykceNHdg cNayeBItc ngkatbnyFnFan.

Record-embodied documented facts, such as: design parameters; specifications; blue-prints; operation, maintenance and service manuals—called Inforware—which enable quick learning and help time and resource savings.

edIm,IbeBj RKbRbtbtkarGaCvkm RkmhnTagGsRtvmanFatTagbnxageICaca)ac FatTagbn enHehIy)ancIrmpSbegItbEIgFnFanrbsGgPaBeTACapItpIeTIbeyIgehAFatTagbnenHfa CasmasFaténbeckvTüa (Technology Component).

III-KnHsxan²srabvayté IeTAeI Technology Component

edaysarEtvsaIPaBrbsbeckvTüakayCaKnHsxankgkarRbktRbECg dcenHkarvayté IeTAeIK Iatrvagsmasfatbeckvtüatag4 manTnakTngeTAkarcgIbgajBIPaBxag ngPaBexSay

rbsGgPaBmy)an. eteKGacvaytémFatnmy²énTechnologyrbsGgPaBmyedayrebobNa?
wcncsxansrabvaytéIeTAeImxgarrbs Technoware mandcxageRkam³

- ITPaBrbspItkm Scale of operation,
- ThrbsTnpI Scope of outputs,
- KNPaBrbsTnpI ng Quality of outputs, and
- svtPaB b pItkmmankarKtKreTAeIbrsan Safety or environmental soundness of operation.

wcncsxansrabvaytéIeTAeImxgarrbs Humanware manTnakTngeTAng³

- krtceNHdgTeTA level of general education (knowledge intensity);
- PaBRtmRtvénkarbNHbNa Appropriateness of training and retraining,
- bTBesaFnEdImanTnakTngeTAngkargar Relevant experience, and
- kareIkTkctbKIk Motivation of the personnel.

wcncsxansrabvaytéIeTAeImxgarrbs infowaremandcxageRkam³

- téI Relevance (value),
- Timeliness (utility), and
- Reliability of acquired facts.

wcncsxansrabvaytéIeTAeI Orgaware positionmandcxageRkam³

- teNrkarrbsTpSar Market performance,
- RbsTPaBrbsGgPaB Organizational effectiveness, and
- PaBeCOCakrbsGgPaBeTAeIsmtPaBbeckvTüa Technological capability self-reliance of the enterprise.

IV-Infoware on Product Technology

edIm,IbegIt)anpItpIbeckvTüaeKRtvkarBtmanBrsxanK³

-Product design inforware-refer to information describe about products.

-Product usage inforware-refer to information describe about product usage.

-Product Design Inforware EckCabRkm³

- **Design foundation inforware (DFI)**

  sedAeTAeIBtmanEdIpIPaBc,asIasGBItrvkarCamIdansrab Design pItpI, TsSnTankgkarrcna, beckeTs Simulation, ng vFsaRsvPaK EdICaesckRtvkar srabEsgyI ng BüakrNceBaH Product performance.]TahrN Computer Aid Design Tools.

- **Design specifications inforware (DSI)**

  Information such as engineering drawings of the product; design specifications; and design calculations used.

-Product Usage Inforware

- Product Operating inforware (POI)

  sedAeTAeII Information TagLaydcCa vFkgkar Operating pItpI, kmvFsrab eRbR)asCamypItpI ng BtmansrabteLgpItpI.

- Product Maintenance (PMI)

  sedAeTAeII Information pIeGayGkeRbR)asBrebobEfTa CsCI ng esvakm epSg²TakTgng pItpI.]TahrN Éksart;hTa (Hardware and Software) ng vFsaRskgkaredaHRsaybBaamycnn.

- Product performance enhancing inforware (PPI)

  Btmanb CaceNHdgTeTAEdIpIeGayGkeRbR)asGacyIBrebob Upgrade ng Optimize Product Performance.

sKaI

1-RkmhnEdIedrtrCa ***dealer*** rbsRkmhndéTEtgcabGarmNeRcneTAeII ***product usage technology.*** eRBaHRkmhnBEmnCaGkpItpaIeT CaGkTTIpItpIBRkmhnpItngEckcayeTA eIpSareKaIedA dcenHRkmhnRtvykctTkdakceBaHBtmansGBkarRbR)aspItpI CnkaI RkmhnRtverobckBabevcxb bBaküENnaxs²KaGaRsyeTAngpSareKaIedA.

2-ceBaHRkmhnEdImansmtPaBpItpItpIbeckvTüa EtgcabGarmNeRcIneTAeI *product design technology*. mannyfaRkmhnRtvkarRbsTPaBkgkarpIt.

3-ceBaHRkmhnxHEdIBakkNaIpIt BakkNaICa dealer EtgcabGarmNeRcIneTAeITag product usage ng product design.

V-Conclusion

Process technology GackNt)anfaCakarsEdgec j BTnakTngrvagsmasFatbzmTagbn rmman[3] an object-embodied form called technoware; a human embodied form called humanware; and information embodied form called inforware; and an institution embodied form called orgaware. smasFatTagbnbeB j eGayKaeTAv j eTAmk ngmanTnakTngrvagKangKa. RbtbtkarGaCvkmmn Gacektman)aneTebIKansmasFatNamykgceNamsmasFatTagbnenaH. mannyfa [3]

v Technoware, in any manufacturing technology, Rtv)anteLg teNIrkar ng Ekr I Greday humanware.

v Humanware KCaFatEdImantéIbptrbsbeckvTüa ebIKan humanware eTaHbeygman technoware bnNakeday cgakpItkmngmnGacRbRBteTA)anRsIenaHeT.

v RbsTPaBénkareRbR)as technoware ng humanware edm,IsrbsrIskmPaBepSg[2]kgRbtbtkar CatnaTrbs orgaware.

v mantrvkarCaca)acénKNPaBrbs inforware edm,IykeTAEkIGrkareRbR)as technoware eday humanware. mannyfaGkeRbR)asGaceRbR)as technoware Gmyk)anRbsnebI inforware Rtv)an erobceLgc,asIasnggayyI. pymkvjRbsnebImanFnFanmnsSBEk[2]eKGacbEIgngbegIt eGayman inforware myc,asIasnggayyIeTAvj)an. "Good quality inforware is needed to improve the utilization of technoware by humanware. In turn good quality humanware can facilitate the refinement and development of inforware." ceBaH Technoware EdrbegIteLg mkedayKanBtmanc,asIasTamTareGaymankarbNHbNaIdI humanware eTIbGaceRbR)asva va)an.

v The introduction of advance technoware in an organization often necessitates the hiring of highly qualified support humanware and the changing of the orgaware to suit the new environment. *(SmGanbEnmenAcinc Self_Reading Rtg MOT indicators for Developing Country)*.