SAP Module-wise ABAP Awareness Compendium – Technical Handbook for ABAPers

This compendium provides module-wise ABAP awareness details for SAP professionals. It bridges functional and technical understanding across 14 SAP modules, helping ABAP developers adapt quickly to cross-functional projects with real-time business and technical clarity.

SD – Sales and Distribution

Functional Focus Area	ABAP Awareness Details
Sales Document Flow	Understand VBAK–VBAP–VBFA linkage. Document chain from Inquiry → Quotation → Order → Delivery → Billing. Key field VBFA-VBELN for flow; exits in MV45AFZZ; copy control debugging.
Pricing Logic	Condition technique using KOMK/KOMP, KONV; routines via VOFM; BADIs for custom pricing logic.
Partner Functions	Partner roles in VBPA; partner determination procedure; influences on delivery/billing.
Output Determination	Configured via NACE; Smartforms or Adobe forms linked through driver programs; RSNAST00 for debug.

Enhancement Spots

- User exits: `MV45AFZZ` (sales order), `RV60AFZZ` (billing)
- BADIs: `SD_SALESDOCUMENT_CREATE`, `BADI_SD_SALES_ITEM`, `BADI_SD_BILLING`
- Enhancements: Copy control routines (VOTXN, VOFM), Pricing routines, Output determination (`USEREXIT_SAVE_DOCUMENT_PREPARE`)

Custom Developments

- Sales order auto-population logic
- Custom sales reports (pending deliveries, blocked orders)
- Interface to CRM/e-commerce via IDoc `ORDERS05`
- Invoice Smartform (`RVINVOICE01`)
- Fiori app backend for "Sales Overview" via CDS/OData

Integration/Automation

- Auto invoice posting to FI
- Credit check logic customization
- Pricing simulations in AMDP/CDS

MM – Materials Management

Functional Focus Area	ABAP Awareness Details
Procurement Flow	From PR (EBAN) to PO (EKKO/EKPO) to GR/IR (MSEG, BKPF). Understand movement types and release strategies.
Release Strategy	Workflow and BADIs (ME_PROCESS_PO_CUST); field catalog CEKKO; exit MM06E005.
Invoice Verification	Three-way match; tables RBKP/RSEG; BAdI MRM_HEADER_CHECK.
Inventory Management	Stock overview in MARD/MBEW; movement type logic in T156.

Enhancement Spots

- BADIs: `ME_PROCESS_PO_CUST`, `ME_PURCHDOC_POSTED`, `MB_DOCUMENT_BADI`
- Exits: `MM06E005` (PO), `MB_CF001` (MIGO), `EXIT_SAPMM06E_012` (auto plant/SL determination)
- Implicit Enhancements in MIRO (Invoice verification)

Custom Developments

- PO release workflow logic
- Custom vendor evaluation report
- GR/IR clearing automation
- PO Smartform (`MEDRUCK`)
- Material movement reports using CDS

Integration/Automation

- IDoc interfaces for PO & GR (`ORDERS`, `MBGMCR`)

- Vendor portal integration
- Auto stock update jobs via BAPIs

PP – Production Planning

Functional Focus Area	ABAP Awareness Details
Production Order Flow	Planned → Production Order → Confirmation → GR; AFKO–AFVC–AUFK linkage.
BOM & Routing	Tables STPO/STKO for BOM, MAPL/PLPO for routing; FMs like CS_BOM_EXPL_MAT_V2.
MRP Logic	MDKP/MDTB; MRP run logic and stock requirement list.
Integration Points	PP integrates with MM (components) and SD (sales order–based production).

Enhancement Spots

- BADIs: WORKORDER_UPDATE, BADI_ROUTING_UPDATE, BADI_MRP_RUN
- Exits: PPCO0007 (Prod. order save), EXIT_SAPLCORU_001 (confirmation)
- Implicit: Material staging & order close automation

Custom Developments

- Production order custom ALV reports
- BOM explosion reports
- Order confirmation enhancements
- Smartform for production labels

Integration/Automation

- Interface between MES and SAP PP (via IDocs or RFC)
- Auto material issue from backflush
- CDS-based production KPI dashboard

QM – Quality Management

Functional Focus Area	ABAP Awareness Details
Inspection Lot	QALS/QAMV; results recording QE01; UD posting QA11.
Notification Handling	QMEL/QMSM; BAPI_QUALNOT_CREATE; exit QQMA0014.
Usage Decision	Automation via QEVA0001; stock movement from UD.
Integration	QM linked with MM (GR inspection) and PP (in-process inspection).

Enhancement Spots

- BADIs: `QPL1_MODIFY_DATA`, `QEVA_SUBSCREEN_5000`, `QPR5_USEREXIT`
- Exits: `QEVA0001` (Usage Decision)
- Customer-exits in notification creation

Custom Developments

- Quality certificate Smartform (`QM_CERTIFICATE`)
- Inspection result upload from external device
- Defect analysis CDS view
- Automated UD posting logic

Integration/Automation

- QM integration with MM (GR inspection) and PP (in-process inspection)
- Mobile inspection apps via OData

WM – Warehouse Management

Functional Focus Area	ABAP Awareness Details
Transfer Orders	LTAK/LTAP; exits MWMTO001; delivery linkage with LIKP/LIPS.
Bin Management	LQUA for quant; storage type strategy T301.

Integration with IM	IM-WM mapping via movement types (101→999); stock sync logic.
Difference Posting	LX22; recount and adjustment handling in user exit.

Enhancement Spots

- Exits: `MWMTO001`, `EXIT_SAPLL03A_002` (bin determination)
- BADIs: `LE_WM_TO_EXIT`, `LE_SHP_DELIVERY_PROC`

Custom Developments

- Custom TO creation logic
- RF transaction screen enhancement
- WM monitor reports
- Delivery Smartform (pick list)

Integration/Automation

- Real-time stock movement updates
- Integration with handheld scanners
- Stock reconciliation jobs

EWM – Extended Warehouse Management

Functional Focus Area	ABAP Awareness Details
Warehouse Orders	/SCWM/ORDIM_C and /SCWM/ORDIM_O; BOPF CRUD operations.
Inbound/Outbound Delivery	/SCWM/PRDI, /SCWM/PRDO; integration via IDocs or CIF.
Queue/Resource Management	/SCWM/QUEUE, /SCWM/RESOURCE; BADIs /SCWM/EX_*.
RF Framework	/SCWM/RFUI; mobile enhancements via handler classes.

Enhancement Spots

- BADIs: `/SCWM/EX_CORE_WHO_CREATE`, `/SCWM/EX_PACK_SPEC`

- BOPF Enhancements: `/SCWM/BO_WAREHOUSEORDER`, `/SCWM/BO_DELIVERY`

Custom Developments

- Custom EWM Monitor enhancements
- RFUI handler customizations
- Integration interfaces to TM (Transportation Management)
- Warehouse dashboard using CDS

Integration/Automation

- CIF data sync with ERP
- External logistics partner API integration

HR – Human Resources

Functional Focus Area	ABAP Awareness Details
Infotype Framework	PA0000–PA0099, HRP1000–HRP1001; HR_READ_INFOTYPE and HR_INFOTYPE_OPERATION.
Payroll Cluster	PCL1/PCL2; CU_READ_RGDIR and PYXX_READ_PAYROLL_RESULT; schema RPCALCX0.
Time Management	Infotypes 2001–2006; cluster B2 in PCL2; program RPTIME00.
OM	HRP1000–HRP1001; relationships and evaluation paths; RH_READ_INFTY.

Enhancement Spots

- BADIs: `HRPAD00INFTY`, `HRPBSIN_INFTY`
- Exits: `PBAS0001` (Personnel actions)
- User-exits in Payroll Schema or PCR
- Enhancement framework for PA30 & PA40 events

Custom Developments

- HR report programs using PNP logical DB

- Payroll reconciliation reports
- ESS/MSS backend OData services
- HR Smartforms (Payslip, Offer Letter)

Integration/Automation

- Payroll → FI posting (RPCIPE00)
- Interfaces with 3rd-party HR/payroll systems
- Authorization reports (P_ORGIN, P_PERNR)

FI – Financial Accounting

Functional Focus Area	ABAP Awareness Details
Document Posting	BKPF/BSEG; validations via BTE or BADI_ACC_DOCUMENT.
Clearing	BSIK/BSAK; reconciliation logic; F110 payment run.
Integration	FI-MM via GR/IR; FI-SD via billing (VBRK→BKPF).
Dunning/Payments	Programs F150/F110; tables REGUH/PAYR.

Enhancement Spots

- BADIs: `BADI_ACC_DOCUMENT`, `BADI_FDCB_SUBBAS01`
- BTEs: `00001120` (before posting), `00001830` (payment)
- User exits: `EXIT_SAPLF048_001` (validation), `RFKORIEX` (dunning)

Custom Developments

- Custom journal upload tool
- Auto FI posting programs
- Dunning notice Smartforms
- Vendor/customer balance ALV reports

Integration/Automation

- FI-SD invoice posting
- FI-MM GR/IR clearing
- Tax integration with 3rd-party systems

CO – Controlling

Functional Focus Area	ABAP Awareness Details
Cost Center Accounting	COEP, CSKS; primary/secondary cost flow; reporting logic.
Internal Orders	AUFK, COEP; settlements KO88; exit EXIT_SAPLKOBS_001.
Profitability Analysis	CE1xxxx; CO-PA derivations; EXIT_SAPLKEDRC.
Integration	FI-CO document linkage; cost flow reconciliation.

Enhancement Spots

- BADIs: `K_ORDER_UPDATE`, `CO_PA_CUSTOMER_EXIT`
- Exits: `EXIT_SAPLKEDRC` (CO-PA derivation)

Custom Developments

- Cost center analysis reports
- CO reconciliation reports
- Settlement automation jobs
- CO-PA extraction to BI via CDS

Integration/Automation

- FI-to-CO cost transfer
- Integration with profitability analysis tools

IS-Retail

Functional Focus Area	ABAP Awareness Details
Article Master	MARA, WLK1–WLK4; site and assortment-

specific extensions.

Listing/Assortment	WRS1/WRF1; listing via BAPI and BADIs.
Promotion/Pricing	WAKH/WAKP; POS outbound IDocs (WPUUMS).
Store Integration	POSDW interface for store transactions.

Enhancement Spots

- BADIs: `WVKP_ARTICLE`, `WPR_RETAIL`
- Exits in POS inbound/outbound processing (`WPUBON`, `WPUUMS`)

Custom Developments

- Article master upload (BAPI_MATERIAL_SAVEDATA)
- POS interface enhancements
- Store-wise sales CDS reports
- Promotion management Smartforms

Integration/Automation

- POS to SAP sync
- Price update automation
- Inventory integration with WM

IS-Oil

Functional Focus Area	ABAP Awareness Details
Hydrocarbon Management	OIH* tables; conversion factor logic; BADI_OIH_MATERIAL_POSTING.
Excise Handling	J_1I* tables; excise at goods movement; integration with CIN.
Terminal Operations	O4T*; tank stock reconciliation; FMs for movements.
Pricing	Integration with MM pricing for oil valuation.

Enhancement Spots

- BADIs: `OIH_MATERIAL_POSTING`, `OIL_MM_DOC`, `OIL_SD_DELIVERY`
- Exits in terminal operations and bulk movements

Custom Developments

- Hydrocarbon stock reconciliation reports
- Tank inventory Smartforms
- Excise automation routines

Integration/Automation

- SAP–Terminal integration
- Automated density/conversion factor calculation

VMS – Vehicle Management System

Functional Focus Area	ABAP Awareness Details
Vehicle Lifecycle	/VMS/VVEHICLE; order and status tracking.
VIN Management	VIN generation logic; /VMS/VEHICLE_CREATE enhancement.
Dealer Management	Dealer integration via IDocs or BAPIs.
Integration	Tight coupling with SD, MM, and FI for end-to-end vehicle processing.

Enhancement Spots

- BADIs: `BADI_VMS_VEHICLE_SAVE`, `BADI_VMS_ORDER`
- Enhancement framework in `/VMS/*` BOs

Custom Developments

- VIN generation program
- Dealer sales interface
- Vehicle lifecycle Smartform

Integration/Automation

- Integration with SD/MM for procurement and sales
- Fleet tracking via OData services

HCM – Human Capital Management

Functional Focus Area	ABAP Awareness Details
Infotype Framework	PA0000–PA0099, HRP1000–HRP1001; time-dependency logic; HR_READ_INFOTYPE, HR_INFOTYPE_OPERATION.
Payroll & Cluster Logic	PCL1/PCL2; CU_READ_RGDIR, PYXX_READ_PAYROLL_RESULT; RPCALCX0 schema flow.
Time Management	Infotypes 2001–2006; RPTIME00 program; optimize reads for high volume.
Organizational Management	HRP1000/HRP1001; OM objects (O,S,P,C); RH_READ_INFTY, evaluation paths.
Payroll → FI Integration	Program RPCIPE00; wage type mapping; PAYR→BKPF/BSEG posting logic.
Authorizations	P_ORGIN, P_ORGXX, P_PERNR; structural authorizations in reports.
HR Reporting	Logical DB PNPCE; GET PERNR and RP_PROVIDE_FROM_LAST usage.
Workflow & ESS/MSS	SWEHR event linkage; infotype update modules; HCM P&F services.

Enhancement Spots

- BADIs: `HRPAD00INFTY`, `HRPBSIN_INFTY`, `BADI_HRREPORT`
- Exits: Payroll schema user-exits, PCR enhancements
- ESS/MSS backend exits

Custom Developments

- Custom HR forms (Payslip, PF statement)
- Payroll reconciliation reports
- HR analytics via CDS views

Integration/Automation

- Payroll posting to FI
- ESS/MSS OData backend
- Integration with SuccessFactors

IS-Utilities

Functional Focus Area	ABAP Awareness Details
Device Management	EGERH, EABL; device installation/removal; BADI_ISU_DEVICE_INSTALL.
Billing/Invoicing	ERCH, ERDK; BILLING01 enhancement; print forms.
Move-In/Move-Out	ISU_S_MOVE_IN_CREATE; MOVEIN_MOVEOUT enhancements.
FI-CA Integration	Contract accounts in FKKVKP; event FQEVENTS for posting control.

Enhancement Spots

- BADIs: `ISU_BILLING`, `ISU_METER_READ`, `ISU_DEVICE_INSTALL`
- Events: `FQEVENTS`, `BILLING01`, `MOVEIN_MOVEOUT`

Custom Developments

- Bill print Smartforms
- Device replacement interfaces
- AMI integration with meter readings
- Consumption analysis CDS

Integration/Automation

- FI-CA posting
- CRM integration for service contracts
- Payment and dunning automation