📘 ABAP SME Bible for Transitioning ECC → S/4HANA Projects

1. Discovery & Landscape Orientation

Before touching custom code, you must understand the battlefield.

🔷 What to Collect:

- **System Landscape Diagram**
  - DEV, QAS, PRD, Sandbox, Retrofit (ECC if dual landscape exists).
  - Identify RISE vs On-prem vs Private Cloud setups.
- **System Versions**
  - S/4HANA release (e.g., 2021 FPS02), HANA DB version, OS, Kernel.
- **Technical Add-ons**
  - Fiori, GRC, MDG, EWM, TM, Treasury, BTP services.
  - Industry solutions (IS-Retail, IS-U, Automotive, Banking).
- **Transport Management**
  - CTS vs. ChaRM vs. gCTS.
  - Double maintenance approach (ECC parallel run?).
- **Infrastructure Dependencies**
  - SAP CPI/PO interfaces, RFCs, ALE/IDoc setups.
  - External schedulers (Control-M, Redwood, Automic).

📌 **Deliverable:** *"Landscape Orientation Report"* – one diagram + one-page summary.

2. RICEFW Inventory (Custom Objects)

Every transition project hinges on knowing **what's custom**.

🔷 RICEFW Breakdown:

- **Reports** – ZALV reports, queries, KPI dashboards.
- **Interfaces** – IDocs, OData, SOAP, REST, CPI, file-based, MQ.
- **Conversions** – Data migration objects (MM, FI, CO, HR, BP).
- **Enhancements** – User exits, BADIs, enhancement spots, implicit/explicit enhancements.
- **Forms** – Smartforms, Adobe Forms, Sapscript, Output Management (BRF+).
- **Workflows** – A to Z with the respective business requirement.

◆ **Checklist:**

- Extract RICEF list (SE93, SE80, SolMan, CTS logs).
- Map business process owners for each RICEF.
- Identify simplification impact (e.g., SD Rebate replaced by Condition Contracts).
- Mark reusability (some custom objects may be replaced by standard S/4 functionality).

📌 **Deliverable:** *"RICEF Inventory Register"* with attributes → Object ID, Type, Module, Purpose, S/4 Relevance, Remediation Status, Owner.

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3. Custom Code Analysis & Remediation

This is the **heart of ABAP transition**.

◆ **Tools & Methods:**

- **ATC (ABAP Test Cockpit)** with S/4 readiness checks.
- **Simplification DB** – Run S/4 Simplification item checks.
- **SCI (Code Inspector)** – Performance, security, Unicode, dumps.
- **Where-used checks** for obsolete tables (BSID, BSEG, KONV replaced by CDS views).

◆ **Focus Areas:**

- **Obsolete Transactions** – XD01/VD01 → BP, MB1A → MIGO.
- **Obsolete Tables/Structures** – MKPF/BSEG usage → Use ACDOCA views.
- **BDC Programs** – Replace with APIs (BAPIs, OData).
- **CDS & AMDP** – Identify usage of new HANA-optimized design patterns.
- **Code Pushdown** – Migrate heavy SELECT loops to CDS/AMDP.
- **Fiori Enablement** – Expose custom reports as Fiori elements/UI5 apps.

📌 **Deliverable:** *"Custom Code Impact Matrix"* → Object, Issue, Risk, Fix Approach, Status.

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4. Data & Integration Landscape

Data and interfaces are often **transition pain points**.

◆ **Interfaces:**

- Collect list of IDocs, RFCs, APIs, CPI flows.
- Document mapping specs (source/target).

- Capture error-handling procedures.
- Identify "black-box" custom middleware.

🔷 Data Migration:

- Legacy migration method used → LSMW / LTMC / BAPIs / Migration Cockpit.
- Data objects migrated (BP, Material, GL, Open Items).
- Known challenges (e.g., duplicate vendors in BP conversion).
- Open balances reconciliation issues.

📌 **Deliverable:** *"Integration & Data Readiness Log"* – includes status, dependencies, issues.

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5. Functional-Technical Alignment

ABAP work must align with **business processes & simplifications**.

🔷 Key Simplification Items:

- **Business Partner** → Replaces Customer/Vendor.
- **Material Ledger Mandatory** → FI-CO alignment.
- **New Asset Accounting** → Depreciation areas, postings.
- **Universal Journal (ACDOCA)** → One source for FI/CO.
- **Output Management** → Adobe/BRF+ replacing NAST.
- **Credit Management** → FSCM Credit Mgmt replacing FI-AR classic.

🔷 ABAP Role:

- Adjust custom code to new process tables/views.
- Support functional gaps via enhancements.
- Ensure ABAP objects respect new master data structures.

📌 **Deliverable:** *"Business Process–ABAP Dependency Map"*.

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6. Operations & Technical Debt

This ensures **run-mode stability** after transition.

🔷 Checklist:

- **Batch Jobs** – Job inventory, frequency, interdependencies.
- **Monitoring & Logs** – Custom monitoring TCodes? Use SAP standard (Fiori apps, SM37/SM21/ST22).

- **Error Handling** – IDoc error handling, job re-runs, message reprocessing.
- **Performance Issues** – Slow reports, long-running SELECTs.
- **Transport Strategy** – Open transports, sequencing, retrofit conflicts.
- **Defects Register** – High-priority open incidents.

📌 **Deliverable:** *"Stability & Technical Debt Register"*.

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7. Documentation & Handover Gaps

Competitors rarely leave a clean trail. You must check:

- **Functional Specs & Tech Specs** – Are they current? Match actual code?
- **Solution Manager** – Is there traceability from requirements → build → test?
- **Code Repository** – abapGit/GitHub? Or only in SAP system?
- **Testing Evidence** – Unit test docs, UAT sign-offs, regression results.
- **Reusable Assets** – Any frameworks (logging, error handling, wrappers)?

📌 **Deliverable:** *"Documentation & Knowledge Gaps Report"*.

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8. Transition Risks & Red Flags

Common issues when inheriting competitor projects:

- ⚠️ **Over-customization** – ECC designs carried forward instead of adopting S/4 standards.
- ⚠️ **Tribal Knowledge** – Key fixes undocumented, dependent on individuals.
- ⚠️ **Quick Fixes** – Still using BDC, hard-coded logic.
- ⚠️ **Performance** – SELECT * on ACDOCA with joins → kills DB.
- ⚠️ **Security** – Missing Fiori role adjustments, direct table updates.
- ⚠️ **Incomplete Simplification** – Some processes still hybrid (part old, part new).

📌 **Deliverable:** *"Transition Risk Register"*.

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9. Leadership & Strategy

This is where you shine as **Technical Manager/SME**.

🔷 **Immediate Steps (First 30 Days):**

- **Stabilize** – Fix high-severe incidents, stop system bleeding.
- **Engage** – Build trust with business SMEs by explaining what ABAP supports.
- **Map** – Complete RICEF + code remediation status.

◈ **Next Steps (60–90 Days):**

- **Optimize** – Replace BDCs with APIs, ALVs with Fiori elements.
- **Automate** – Introduce regression test automation (CBTA, Tricentis).
- **Standardize** – Reduce Z objects by moving to S/4 best practices.

◈ **Long-Term (Beyond 90 Days):**

- **Innovate** – Use BTP for side-by-side extensions.
- **Analytics** – Embed CDS-based KPIs, real-time dashboards.
- **AI/ML** – Explore SAP AI Core, ML in ABAP RAP.

📌 **Deliverable:** *"90-Day Transition Roadmap".*

✅ Final Structure of the Bible

1. Landscape Orientation Report
2. RICEF Inventory Register
3. Custom Code Impact Matrix
4. Integration & Data Readiness Log
5. Business Process–ABAP Dependency Map
6. Stability & Technical Debt Register
7. Documentation & Knowledge Gaps Report
8. Transition Risk Register
9. 90-Day Transition Roadmap

Note:- Collect the maximum details of the objects → primarily its respective TRs.