MHRF IT Architecture

Main Website

Business Units

Community Development Affordable Housing

Clean Energy Renewable Energy

Counseling Education & Entrepreneurship

MIND
Public Policy Development

IT Infrastructure

Identity & Security
(Entra, MFA, DLP)

Core Apps
(Dynamics 365, EHR, HMIS)

Analytics
(Azure Data Lake, Power BI)

IoT & CMMS
(Clean Energy Telemetry)

Analytics Compliance & Reporting
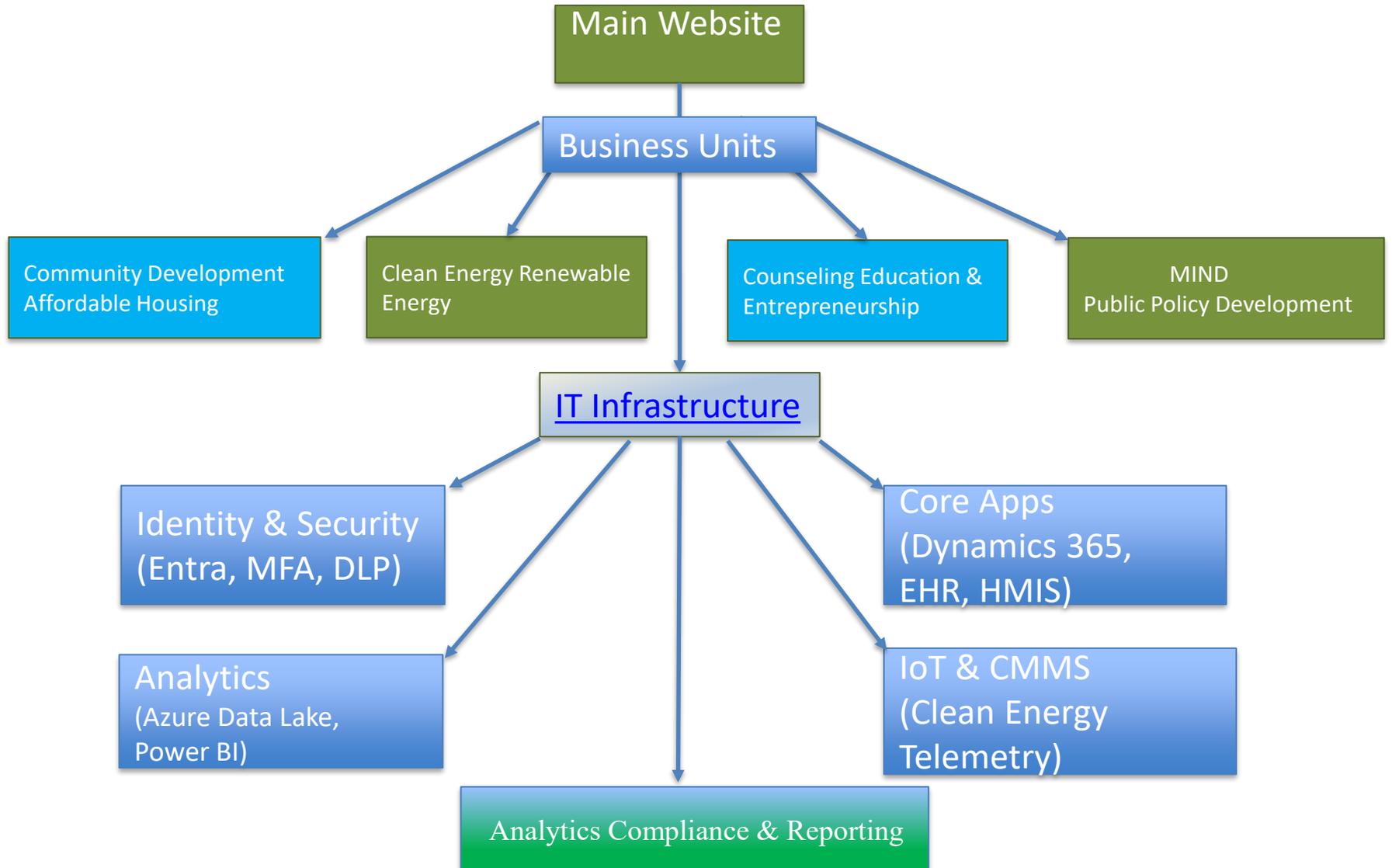
MHRF IT Infrastructure

- HIPAA/HMIS-secure architecture with Microsoft Cloud

- Intake, Case Mgmt, Housing, Counseling, Energy, Entrepreneurship with Dynamics 365

- Azure Data Lake + Power BI for measurable outcomes & equity reporting

- Purview DLP + MS Sentinel SIEM to protect PHI/HMIS

- IoT + CMMS support clean energy metrics & cost savings

- ITIL controls improve uptime, service quality & accountability

- Results: lower cost per outcome, reduced errors, transparent grant reporting

BU Segment and Global Reporting

Community Development Affordable Housing	Clean Energy Renewable Energy	Counseling Education & Entrepreneurship	MIND Public Policy Development

Affordable Housing & HUD HMIS

- Integrated intake, eligibility, inspections, HMIS in Dynamics 365
  - Purview + DLP protects PHI/PII and HUD-required compliance
  - Power BI outcomes: rent burden, housing stability, inspection cycles
  - ITIL controls ensure uptime and accurate reporting
  - Relation to BU Performance

HRSA – Behavioral Health & Primary Care

- Azure EHR + FHIR interoperability care coordination
  - Sentinel + encryption protects PHI (HIPAA compliant)
  - Power BI performance reporting for PHQ-9 & access indicators
  - Identity governance ensures minimum necessary access

SAMHSA – Behavioral Health & SUD

- Secure referrals, care records and telehealth inside Azure Cloud

  - Privacy protections support 42 CFR Part 2 data segregation
  - Outcome dashboards measure engagement and recovery metrics
  - Central monitoring detects unauthorized PHI access

DOE – Clean Energy & Efficiency Programs

[Azure IoT Hub](#) streams clean energy and efficiency telemetry

- CMMS tracks uptime, preventive maintenance and savings
- Power BI dashboards report avoided GHG and cost savings
- Supports DOE grant performance measurement

https://www.nrel.gov/state-local-tribal/e2c-in-depth-partnerships
https://cleancities.energy.gov/

Justice40 & Targeted Community Equity Outcomes

- GIS + CRM target investments to underserved communities
  - Equity dashboards display tangible benefits by neighborhood
  - Zero-trust security protects vulnerable households
  - Architecture supports Justice40 measurement requirements

https://justice40.cnt.org/

RIP – Clean Renewable Energy Projects

- Azure analytics quantifies greenhouse gas reductions and affordability

    - IoT metering validates real-world energy performance
    - CMMS manages lifecycle compliance and warranty protection
    - Dashboards document benefits to low-income/BIPOC households

📊 MHRF Logic Model: Outcomes → Activities → Indicators → Measurement

Program Outcome (Impact)	Activities (What we do)	Short-Term Indicators (What changes first)	Measurement (How we track/evaluate)
1. Increased Housing Stability for Low-Income/ Underserved Households	• Housing intake, eligibility & referral in Dynamics 365• Unit placement & inspections• Stabilization case management• Tenant supports & mediation	• Reduced time from application to placement• Higher compliance with inspections• Increased tenancy retention	• HMIS + Dynamics 365 reports• Inspection metrics (Power BI)• Rent burden % trend• Housing retention rate at 6/12 months
2. Improved Behavioral & Mental Health Outcomes	• Counseling intake & triage• Telehealth appointments via secure EHR• Individual treatment plans• Referral coordination using FHIR	• Reduced wait time for appointments• Increased percent of clients completing treatment plans• Reduction in symptom scores	• PHQ-9/GAD-7 scores documented quarterly• Attendance and no-show metrics• EHR outcome reporting dashboards
3. Increased Household Economic Mobility & Entrepreneurship Success	• LMS training & workshops• Technical assistance (TA)• Microloans & credit coaching• Business development plans	• Higher % of businesses launched• Increased revenue stability• Improved credit readiness	• Intake assessment vs follow-up• Loan performance analytics• 12-month business survival rate• Employment/jobs created
4. Increased Community Health & Safety	• GIS-based neighborhood planning• Community engagement campaigns• Referral to wraparound services• Environmental health mitigation	• More connections to services• Improvements in neighborhood quality indicators	• GIS dashboards (Power BI)• Health/social determinant metrics• Community satisfaction surveys
5. Increased Clean Energy Savings & Resilience	• Solar/efficiency installations• IoT telemetry monitoring• CMMS lifecycle maintenance• Household energy coaching	• Increased household savings• Improved uptime and asset reliability	• Azure IoT Hub telemetry• Energy savings dashboards ($/kWh)• Emissions avoided (CO_2e) measurements
6. Reduced Racial/Economic Equity Gaps Across Service Areas	• Centralized case coordination• Targeting underserved tracts• Outreach campaigns• Integrated referrals	• Higher service participation among BIPOC households• Reduced disparities in housing/health outcomes	• Equity dashboards segmented by race/ZIP• Longitudinal comparison curves• Quarterly equity audits (Power BI)
7. Enhanced Cross-Agency Collaboration & Data Quality	• Shared intake/MDM records• Standardized referrals• Secure data exchange (FHIR/APIs)	• Fewer duplicate records• Faster referrals• Higher data accuracy	• Azure MDM dashboards• Data quality scoring (DQI)• Interoperability logs

Data driven logic model shows **causal pathways**, not just activities to ensure funding and incorporates **equity and compliance**, differentiating MHRF from competitors. Metrics align to **HUD, HRSA, SAMHSA, DOE, Justice40, IRA** reporting expectations

Community Development, Affordable Housing, Energy and CCE Impact

1. Outcomes (Impact-Level Goals)

- Increase housing stability and reduce homelessness
- Improve behavioral health outcomes and access to care
- Increase entrepreneurship and household financial mobility
- Increase clean energy savings and resilience
- Reduce racial and geographic inequities in service access

2) Activities (Service Delivery)

- Housing: intake, placement, inspections, stabilization supports
- Behavioral Health: counseling, telehealth, treatment planning
- Entrepreneurship: training, advising, microloans, credit coaching
- Clean Energy: IoT-enabled monitoring, maintenance, energy coaching
- Equity Targeting: GIS-based outreach and coordinated referrals

3) Short-Term Outputs

- Clients served across service areas
- Counseling sessions & telehealth visits completed
- Businesses supported and microloans issued
- Energy monitoring devices deployed and functioning
- Cross-agency referrals successfully completed

4) Performance Indicators

- Housing stability and placement cycle time
- Reduction in PHQ-9/GAD-7 health measures
- 12-month business survival and job creation
- Monthly household cost savings and COne avoided
- Equity gap reduction measured geographically

5) Measurement Systems

- Dynamics 365: intake, referrals, HMIS integration
- ONC-certified EHR: clinical documentation and outcomes
- Azure IoT Hub: asset telemetry + CMMS lifecycle tracking
- Power BI Dashboards: consolidated reporting & equity analytics
- Azure Data Lakehouse: longitudinal dataset for evaluation

6) Compliance, Security & Privacy

- HIPAA/HITECH protections using Purview and Sentinel
- HUD HMIS federal requirements with encrypted PII handling
- Zero-trust identity access controls via Entra ID
- ITIL governance ensures reliable and auditable operations

Alignment with Public Private Partnership PPP Initiatives

- Target $100 B investments to underserved census tracts (GIS)

- Deploy Equity dashboards quantifying measurable benefits

- Enable Transparent reporting across race/income/geographies

- Support Congressional, CSR and Community Accountability with Benefit Documentation