Production Checklist - Plataforma de Transparencia Municipal

🔒 Seguridad

Autenticación y Autorización

- [x] JWT tokens con expiración configurada
- [x] HTTPS habilitado en producción
- [ ] 2FA opcional para administradores
- [x] Rate limiting en endpoints críticos
- [ ] CORS configurado correctamente
- [x] Sanitización de inputs
- [ ] Protección contra SQL injection
- [ ] XSS protection habilitado

Variables de Entorno

- [x] Todas las variables sensibles en .env
- [x] .env no incluido en control de versiones
- [x] Secrets rotados regularmente
- [ ] Variables de entorno encriptadas en CI/CD

Base de Datos

- [x] Conexiones encriptadas
- [ ] Backups automáticos diarios
- [ ] Backup offsite configurado
- [ ] Disaster recovery plan documentado
- [x] Índices optimizados
- [ ] Query logging habilitado

⚡ Performance

Frontend

- [x] Lazy loading de componentes
- [x] Imágenes optimizadas con Next.js Image
- [x] Code splitting implementado
- [ ] Service Worker para PWA
- [x] Caché de assets estáticos
- [ ] CDN configurado
- [ ] Gzip/Brotli compression

Backend

- [ ] Caching con Redis
- [x] Paginación en todas las listas

- [x] Query optimization
- [ ] Connection pooling
- [ ] Horizontal scaling configurado

Database

- [x] Índices en campos frecuentes
- [ ] Query caching
- [ ] Read replicas configuradas
- [ ] Partitioning para tablas grandes

📊 Monitoreo

Application Monitoring

- [ ] APM tool configurado (Datadog/New Relic)
- [ ] Error tracking (Sentry)
- [ ] Uptime monitoring
- [ ] Performance monitoring
- [ ] User analytics

Infrastructure

- [ ] Server metrics (CPU, RAM, Disk)
- [ ] Database metrics
- [ ] Network monitoring
- [ ] Alertas configuradas

Logs

- [ ] Log aggregation (ELK/Splunk)
- [ ] Log rotation configurado
- [ ] Structured logging
- [ ] Log retention policy

🧪 Testing

Automated Tests

- [x] Unit tests con >70% coverage
- [ ] Integration tests
- [ ] E2E tests
- [ ] API tests
- [ ] Performance tests
- [ ] Security tests

Manual Testing

- [ ] User acceptance testing
- [ ] Cross-browser testing
- [ ] Mobile responsiveness
- [ ] Accessibility testing (WCAG)

📱 Mobile & Accessibility

- [x] Responsive design
- [ ] Touch-friendly UI
- [x] Accessible forms
- [x] Keyboard navigation
- [ ] Screen reader compatible
- [ ] High contrast mode

🔄 DevOps

CI/CD

- [ ] Automated builds
- [ ] Automated testing
- [ ] Automated deployment
- [ ] Rollback strategy
- [ ] Blue-green deployment

Version Control

- [x] Git branching strategy
- [x] Code review process
- [ ] Release tagging
- [ ] Changelog maintenance

📝 Documentation

Technical Documentation

- [x] API documentation
- [x] Architecture diagrams
- [x] Database schema
- [x] Deployment guide
- [ ] Runbook for incidents

User Documentation

- [ ] User manual
- [ ] Admin guide
- [ ] FAQ
- [ ] Video tutorials

🌐 Compliance

Legal

- [ ] Privacy policy
- [ ] Terms of service
- [ ] Cookie policy
- [ ] GDPR compliance (if applicable)

- [ ] Data retention policy

Accessibility

- [ ] WCAG 2.1 Level AA
- [ ] Keyboard navigation
- [ ] Screen reader support
- [ ] Alt text for images

🔧 Operations

Backups

- [ ] Database backups diarios
- [ ] Backup testing mensual
- [ ] Offsite backup storage
- [ ] Recovery time objective (RTO) < 4 hours

Maintenance

- [ ] Maintenance window definido
- [ ] Update strategy
- [ ] Security patch process
- [ ] Dependency updates

📈 Business

Analytics

- [x] User behavior tracking
- [ ] Conversion tracking
- [ ] A/B testing framework
- [ ] Business metrics dashboard

Support

- [ ] Help desk system
- [ ] SLA definidos
- [ ] Escalation process
- [ ] Support documentation

✅ Pre-Launch Checklist

Week Before Launch

- [ ] Full security audit
- [ ] Performance testing
- [ ] Load testing
- [ ] Backup verification
- [ ] DNS configuration
- [ ] SSL certificate

Day Before Launch

- [ ] Database migration dry-run
- [ ] Deployment dry-run
- [ ] Team briefing
- [ ] Rollback plan ready
- [ ] Support team trained

Launch Day

- [ ] Final smoke tests
- [ ] Monitor dashboards ready
- [ ] Announcement prepared
- [ ] Support team on standby
- [ ] Rollback plan accessible

Week After Launch

- [ ] Monitor error rates
- [ ] User feedback collection
- [ ] Performance analysis
- [ ] Bug fixes prioritized
- [ ] Post-mortem meeting

🎯 Performance Targets

- [ ] Page load time < 3 seconds
- [ ] Time to Interactive < 5 seconds
- [ ] Lighthouse score > 90
- [ ] API response time < 200ms
- [ ] 99.9% uptime SLA
- [ ] Zero critical security vulnerabilities

📞 Emergency Contacts

```
Tech Lead: [Nombre] - [Teléfono]
DevOps: [Nombre] - [Teléfono]
Database Admin: [Nombre] - [Teléfono]
Security: [Nombre] - [Teléfono]
On-Call Rotation: [Link al schedule]
```

🔄 Regular Maintenance Schedule

Diario

- [ ] Monitor dashboards
- [ ] Check error logs
- [ ] Verify backups

Semanal

- [ ] Security updates
- [ ] Performance review
- [ ] User feedback review

Mensual

- [ ] Backup restore test
- [ ] Security audit
- [ ] Dependency updates
- [ ] Performance optimization

Trimestral

- [ ] Full security penetration test
- [ ] Disaster recovery drill
- [ ] Architecture review
- [ ] Capacity planning