on only ϵ.

$\Rightarrow \quad |\psi_\epsilon(x) - \psi(x)| \leq \int_{\mathbb{R}^n} |\psi(y)-\psi(x)|\, \chi_\epsilon(x-y)\, dy = \int_{x+\epsilon K} |\psi(y)-\psi(x)|$
$\chi_\epsilon(x-y)\, dy \;<\; \int_{x+\epsilon K} \delta\, \chi_\epsilon(x-y)\, dy \;<\; \int_{\mathbb{R}^n} \delta\, \chi_\epsilon(x-y)\, dy = \delta.$

$\Rightarrow \quad \psi_\epsilon \longrightarrow \psi$ uniformly.

$$\Rightarrow (D\psi_\epsilon)(x) = D\,\psi_\epsilon(x) = \int \psi(y)\, D\chi_\epsilon(x-y)\, dy$$
$$= \int D\psi(y)\, \chi_\epsilon(x-y)\, dy \qquad (\text{by integration parts})$$
$$(D\psi)(x) = \int D\psi(x)\, \chi_\epsilon(x-y)\, dy.$$

$\Rightarrow$ Since $D\psi \in C_c^\infty(\mathbb{R}^n)$, by the argument above.

$$D\psi_\epsilon \longrightarrow D\psi \quad \text{uniformly}.$$

$T_\epsilon(\psi) = T(\psi_\epsilon)$ by the assertion 2, since $D\psi_\epsilon \to D\psi$ uniformly, which implies that $\psi_\epsilon \to \psi$ in the C^∞ topology on $C_c^\infty(\mathbb{R}^n)$, by the continuity of T,

$$T(\psi_\epsilon) \longrightarrow T(\psi) \quad \text{as } \epsilon \to 0, \;\Rightarrow\; T_\epsilon(\psi) \longrightarrow T(\psi)$$
as $\epsilon \longrightarrow 0$.

There are, of course, many subtle questions about the convergence of the smoothing process in particular norms, but we need not get into these here.

A current $T \in \mathcal{D}^q(\mathbb{R}^n)$ may be considered as a differential form

$$T = \sum_{\#I=q} T_I\, dx_I$$